Indiana Law Journal

Volume 85 | Issue 2 Article 5

Spring 2010

# Tort Damages and the New Science of Happiness

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# Tort Damages and the New Science of Happiness[†*]

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## INTRODUCTION

Over the past forty years, philosophers have given way to social scientists in examining happiness. There is, however, a significant difference in approach. Whereas philosophers have spent millennia searching for the meaning of happiness, social scientists have foregone the definitional search in favor of measurement—looking for answers about the causes of, and reasons for, happiness.

The early findings from this research are quite surprising; and despite the fact that this research is still nascent, the happiness revolution[1] is coming to legal scholarship.

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* Thanks to Jane Baron, Ed Deiner, David Hoffman, Kareem Johnson, Leo Katz, Alan Krueger, Andrew J. Oswald, Donald Overton, Peter Spiro; audience members of the American Law and Economics Association annual meeting and the Midwest Law and Economics Association annual meeting; and faculty workshops at Florida State University Law School, University of Missouri Law School, Rutgers University-Camden Law School, Temple Law School, and the Social Psychology Colloquium at Temple University, for helpful comments and suggestions.

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1. It does not seem a stretch to refer to the scholarship and press related to the new science of happiness as a "revolution." In the past five years, there have been scores of books, dozens of academic articles, and a fair smattering of popular press devoted to questions about happiness. As to the books, see generally ED DIENER & ROBERT BISWAS-DIENER, HAPPINESS: UNLOCKING THE MYSTERIES OF PSYCHOLOGICAL WEALTH (2008); BARBARA FREDRICKSON, POSITIVITY:

Since 2007, the legal hedonists have published a number of articles arguing that new empirical data on happiness requires changes to, or a better explanation of, existing legal institutions. These scholars have so far set their sights on changing the taxation,[2] corporate governance,[3] criminal justice,[4] and tort systems.[5] And there is no reason to believe they will stop there.

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GROUNDBREAKING RESEARCH REVEALS HOW TO EMBRACE THE HIDDEN STRENGTH OF POSITIVE EMOTIONS, OVERCOME NEGATIVITY, AND THRIVE (2009); BRUNO S. FREY, HAPPINESS: A REVOLUTION IN ECONOMICS (2008); HANDBOOK ON THE ECONOMICS OF HAPPINESS (Luigino Bruni & Pier Luigi Porta eds., 2007); DANIEL M. HAYBRON, THE PURSUIT OF UNHAPPINESS: THE ELUSIVE PSYCHOLOGY OF WELL-BEING (2008); DACHER KELTNER, BORN TO BE GOOD: THE SCIENCE OF A MEANINGFUL LIFE (2009); BERNARD M. S. VAN PRAAG & ADA FERRER-I-CARBONELL, HAPPINESS QUANTIFIED: A SATISFACTION CALCULUS APPROACH (Rev. ed. 2008). For a review of the academic literature, see generally Peter H. Huang, *Authentic Happiness, Self Knowledge, and Legal Policy*, 9 MINN. J.L. SCI. & TECH. 755 (2008). For a sample of the popular press devoted to happiness, see Alice Park, *The Happiness Effect: How Emotions and Even Behaviors can Spread like an Epidemic*, TIME, Dec. 22, 2008, at 40; *20/20: Happiness: How to Find It, Understand It and Achieve It*, (ABC television broadcast Jan. 11, 2008); *60 Minutes: The Pursuit of Happiness* (CBS television broadcast Feb. 18, 2008); Laura Blue, *Is Our Happiness Preordained*, TIME.COM, Mar. 12, 2008, http://www.time.com/time/health/article/0,8599,1721954,00.html; Tiffany Sharples, *Can You Predict Happiness*, TIME.COM, Feb. 12, 2008, http://www.time.com/time/health/article/0,8599,1714473,00.html.

2. *See, e.g.*, Mirko Bagaric & James McConvill, *Stop Taxing Happiness: A New Perspective on Progressive Taxation*, 2 PITTSBURGH TAX REV. 65 (2005) (arguing that empirical happiness research data supports progressive taxes); Robert H. Frank, *Progressive Consumption Taxation as a Remedy for the U.S. Savings Shortfall*, 2 ECONOMIST'S VOICE 1 (2005), http://www.bepress.com/cgi/viewcontent.cgi?article=1022&context=ev (arguing that imposing a progressive consumption tax remedies a primary reason that Americans save so little, namely the pressure to keep up with community spending standards, that have been exacerbated recently by rising income and wealth inequality); Thomas D. Griffith, *Progressive Taxation and Happiness*, 45 B.C. L. REV. 1363 (2004) (arguing that happiness research provides additional support for progressive taxation); Marjorie E. Kornhauser, *Educating Ourselves Towards a Progressive (and Happier) Tax: A Commentary on Griffith's* Progressive Taxation and Happiness, 45 B.C. L. REV. 1399 (2004) (proposing a national tax literacy campaign to increase public knowledge about and acceptance of progressive taxation). *But see* Diane M. Ring, *Why Happiness?: A Commentary on Griffith's* Progressive Taxation and Happiness, 45 B.C. L. REV. 1413 (2004) (examining issues raised by proposals to use happiness research in determining tax policy); David A. Weisbach, *What Does Happiness Research Tell Us About Taxation?*, 37 J. LEGAL STUD. S293 (2008) (examining arguments for progressive taxation and concluding they are not supported by existing data or models about happiness).

3. *See, e.g.*, JAMES MCCONVILL, THE FALSE PROMISE OF PAY FOR PERFORMANCE: EMBRACING A POSITIVE MODEL OF THE COMPANY EXECUTIVE (2005) (arguing that happiness research explains why existing CEO compensation practices are misguided); JAMES MCCONVILL, SHAREHOLDER PARTICIPATION AND THE CORPORATION: A FRESH INTER-DISCIPLINARY APPROACH IN HAPPINESS (2006); James McConvill, *Executive Compensation and Corporate Governance: Rising Above the "Pay-for-Performance" Principle*, 43 AM. BUS. L.J. 413, 416–17, 421–30 (2006) (arguing that happiness research explains why existing CEO compensation practices are misguided); James A. McConvill, *Positive Corporate Governance*, 6 J. BUS. & SEC. L. 51, 57–62 (2006) (arguing that corporate law should recognize and foster potential and strengths of company executives, rather than simply trying to control them by imposing corporate governance requirements); James McConvill, *Shareholder Empowerment as an End in Itself: A*

In large measure, the legal hedonists rely on two early findings from the happiness literature to undergird their work. The first is hedonic adaptation. This term refers to a finding that neither one's life circumstances nor external life events have much lasting impact on long-term affect. That is, better-educated, prettier, and wealthier people are not necessarily happier.[6] Likewise, people who win the lottery or become disabled do not note a significant change in happiness over the long term.[7] Although someone who becomes disabled may be less happy for a short time period, in the long run, her happiness will return to its preinjury state.[8]

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*New Perspective on Allocation of Power in the Modern Corporation*, 33 OHIO N.U. L. REV. 1013 (2007) (arguing that shareholder participation can be a vehicle for realizing happiness); (same). *But see* Harry G. Hutchison & R. Sean Alley, *Against Shareholder Participation: A Treatment for McConvill's Psychonomicosis*, 2 BROOK. J. CORP. FIN. & COM. L. 41 (2007) (arguing critically against McConvill's Panglossian proposals for enhanced shareholder participation); Harry G. Hutchison & R. Sean Alley, *The High Costs of Shareholder Participation*, 11 U. PA. J. BUS. L. (forthcoming 2009) (same).

4. *See* Mirko Bagaric & James McConvill, *Giving Content to the Principle of Proportionality: Happiness and Pain as the Universal Currency for Matching Offence Seriousness and Penalty Severity*, 69 J. CRIM. L. 50 (2005) (arguing that pain and unhappiness data can ensure punishments imposed match the severity of crimes); John Bronsteen, Christopher Buccafusco & Jonathan Masur, *Happiness and Punishment*, 76 U. CHI. L. REV. (forthcoming 2009), *available at* http://ssrn.com/abstract=1241008 (arguing that happiness research implies that retributivists and utilitarians must seek novel ways to calibrate traditional punitive sanctions).

5. *See, e.g.*, Samuel R. Bagenstos & Margo Schlanger, *Hedonic Damages, Hedonic Adaptation, and Disability*, 60 VAND. L. REV. 745 (2007); John Bronsteen, Christopher Buccafusco & Jonathan S. Masur, *Hedonic Adaptation and the Settlement of Civil Lawsuits*, 108 COLUM. L. REV. 1516 (2008); Cass R. Sunstein, *Illusory Losses*, 37 J. LEGAL STUD. S157 (2008); Peter A. Ubel & George Loewenstein, *Pain and Suffering Awards: They Shouldn't Be (Just) About Pain and Suffering*, 37 J. LEGAL STUD. S195 (2008).

6. Richard E. Lucas, Andrew E. Clark, Yannis Georgellis & Ed Diener, *Unemployment Alters the Set Point for Life Satisfaction*, 15 PSYCHOL. SCI. 8, 8 (2004) (finding that life circumstances like income, education, and physical attractiveness "often account for a very small percentage of variance in [subjective well-being]"); Eunkook Suh, Ed Diener & Frank Fujita, *Events and Subjective Well-Being: Only Recent Events Matter*, 70 J. PERSONALITY & SOC. PSYCHOL. 1091, 1091 (1996) (citing other studies suggesting that life circumstances do not affect happiness).

7. *See, e.g.*, Richard E. Lucas, *Time Does Not Heal All Wounds: A Longitudinal Study of Reaction and Adaptation to Divorce*, 16 PSYCHOL. SCI. 945, 945 (2005) ("Although people dread the prospect of becoming disabled, losing their job, or ending a relationship, much existing research suggests that they will not suffer long-term emotional consequences from these events."); *see also* Shane Frederick & George Loewenstein, *Hedonic Adaptation*, *in* WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY 302 (Daniel Kahneman et al. eds., 1999); Philip Brickman, Dan Coates & Ronnie Janoff-Bulman, *Lottery Winners and Accident Victims: Is Happiness Relative?*, 36 J. PERSONALITY & SOC. PSYCHOL. 917 (1978).

8. In response to these findings, researchers hypothesized that people adapt psychologically like they adapt physiologically. Just as people initially react strongly to certain scents but soon learn to ignore the smell or initially react negatively to cold water but soon learn to tolerate it, the emotional system adjusts to current life circumstances and events to return to baseline levels. *See generally* Philip Brickman & Donald T. Campbell, *Hedonic Relativism and Planning the Good Society*, *in* ADAPTATION-LEVEL THEORY: A SYMPOSIUM 287, 289 (M. H. Appley ed., 1971) (suggesting that individuals cannot sustain happiness over time because they

The second finding is that people overestimate how long and much their future affect (that is, their emotional states) will change in response to life events.[9] In other words, people are poor forecasters of the duration and intensity of their own future affect. Similarly, people do just as poorly when predicting how life events will impact other people's affect.

In this article we want to quell this growing revolution. Our primary focus, however, is more limited to the legal hedonists' attacks on jury awards for tort damages.[10] Debates about the propriety of noneconomic tort awards have raged for decades. The legal hedonists claim that the old argument that noneconomic awards are too large, irrational, and unpredictable,[11] has new support from the science of happiness.

In light of the two findings described above, the legal hedonists' attack on the tort system is predictable.[12] They argue first that noneconomic damages in tort—like damages for pain, suffering, emotional distress, or loss of enjoyment of life—are fleeting and illusory, because people adapt, and their happiness returns to its previous levels.[13] Second, legal hedonists contend that just as individuals mispredict how those injuries will impact their own happiness, so too will judges and jurors err when they try to predict the unhappiness of plaintiffs in assessing noneconomic damages. That is, in part, judges and juries focus inappropriately only upon harms to plaintiffs, and they do

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live on a "hedonic treadmill").

9. For overviews of affective forecasting, see Jeremy A. Blumenthal, *Law and the Emotions: The Problems of Affective Forecasting*, 80 IND. L.J. 155, 165–81 (2005); George Loewenstein & David Schkade, *Wouldn't It be Nice? Predicting Future Feelings*, *in* WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY, *supra* note 7, at 85; Timothy D. Wilson & Daniel T. Gilbert, *Affective Forecasting*, 35 ADVANCES IN EXPERIMENTAL SOC. PSYCHOL. 345 (2003). *See generally* DANIEL GILBERT, STUMBLING ON HAPPINESS (2006); TIMOTHY WILSON, STRANGERS TO OURSELVES: DISCOVERING THE ADAPTIVE UNCONSCIOUS 137–58 (2002).

10. Compensatory tort damages (as distinguished from punitive or nominal tort damages) are meant to restore an injured party to his or her preinjury position. Compensatory damages restore both economic (or pecuniary) losses and noneconomic (or nonpecuniary) losses. Economic losses include lost wages, loss of earning potential, and costs associated with medical care and rehabilitation. Noneconomic losses compensate when there is no obvious external objective measure for the loss. Noneconomic damage awards include compensation for pain, suffering, mental distress, and loss of enjoyment of life. While there is little dispute about the calculation of economic damages, noneconomic damages have engendered deep debate. See *infra* Part III for a more fulsome definition of noneconomic damages, a deeper discussion of the debate, and the legal hedonists' role in that debate.

Of course, tort victims may also receive punitive or nominal damages. Punitive damage awards are granted as a means of punishing the defendant for outrageous conduct and deterring future conduct, not as a means to return a plaintiff to an ex ante position. In contrast, nominal damages are given as a symbolic award, and are designed to vindicate a right even if there is no compensatory loss.

11. EDIE GREENE & BRIAN H. BORNSTEIN, DETERMINING DAMAGES: THE PSYCHOLOGY OF JURY AWARDS 23 (2003).

12. *See* Drake Bennett, *Perfectly Happy*, BOSTON GLOBE.COM, May 10, 2009, http://www.boston.com/bostonglobe/ideas/articles/2009/05/10/perfectly_happy/.

13. *See* Sunstein, *supra* note 5, at S168 (stating "many apparently serious losses inflict relatively little in the way of long-term hedonic harm"); Ubel & Loewenstein, *supra* note 5, at S205–07 (arguing that courts should not include as an element of damage awards any amount that compensates for loss of happiness, because adaptation makes emotional changes as a result of adverse events or life circumstances fleeting).

not consider the way in which plaintiffs' lives change postinjury, the relative health of the plaintiff, or the human capacity to adapt.[14] As a result of these hedonic judgment (or affective forecasting) errors, judges and juries systematically grant excessive noneconomic damages.[15]

Rather than suffer these errors, the legal hedonists have different prescriptions. Samuel Bagenstos and Margo Schlanger, for example, argue that damage awards for loss of enjoyment of life should be eliminated because they "entrench the societal view that disability is inherently tragic, and encourage people with disabilities to see their lives as tragedies."[16] Cass Sunstein, on the other hand, argues that because of adaptation and affective forecasting errors, noneconomic awards are inherently irrational and unpredictable.[17] He claims the legal system should take the power to grant these awards away from judges and juries and instead award hedonic damages only from a "Civil Damages Schedule," constructed by experts and designed to eliminate juror error from the process.[18]

Although these arguments parallel or replicate earlier arguments about noneconomic tort awards, they have the potential to move the debate because the arguments are made by pedigreed scholars and because the arguments are wrapped in a veneer of science. There are, however, several problems with these arguments. First, they understate the flexibility of the legal doctrines governing noneconomic tort awards. This problem results partly from a definitional disjunction between what the legal hedonists mean when they refer to noneconomic damages and what courts mean when they use that term.[19] Second, the arguments suffer from an empirically unjustified confidence in the strength and ubiquity of adaptation.[20] Lastly, to whatever extent adaptation occurs, the legal hedonists focus only upon the postadaptation positions of plaintiffs without any regard for the preadaptation evaluations of plaintiffs' injuries.[21] In short, the new science of happiness does not change the old debates, and, in fact, may twist the debate in odd ways.

In Part I, we briefly describe the ways that social scientists are trying to measure happiness and the primary objections to these measures. In Part II, we reconsider the early findings of the new science of happiness on which the legal hedonists rely. Based on a number of recent studies that cast doubt upon these early findings, we conclude that the legal hedonists rely on overstated and undertheorized data. In Part III, we return to the legal system. We show that the definition of noneconomic damages used to support the legal hedonists' arguments is at variance with the definitions used by courts and juries to describe pain, suffering, and loss of enjoyment of life. We conclude

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14. *See* Sunstein, *supra* note 5, at S174.

15. *See id.* at S158. This claim, of course, is simply the observation that people make affective forecasting errors as a result of adaptation neglect and the focusing illusion of the litigation system. *Id.*

16. Bagenstos & Schlanger, *supra* note 5, at 773. They do not, however, believe that nonpecuniary damage awards are too high. Rather they argue that certain types of damages, those for loss of enjoyment of life, are unnecessary in light of hedonic adaptation. *Id.* at 773–74.

17. Sunstein, *supra* note 5, at S158, S184–86.

18. *Id.*

19. *See infra* Part III.

20. *See infra* Part II.

21. *See infra* Part IV.

that scholars calling for the demise of jury awards understate the nuance that courts ascribe to noneconomic damages.

In Part IV, we consider whether the research on hedonic adaptation and affective forecasting really casts doubt on jury awards for noneconomic damages. Lastly, we consider the implications for the new science of happiness in the reformation of legal institutions. Although this research may aid institutions and individuals in creating and sustaining happiness,[22] we believe that we should be more cautious when applying these findings to public policy. In particular, we do not believe that research based on adaptation is ready for prime time.

## I. DEFINING AND MEASURING HAPPINESS

Before we move on to discuss our concerns with the legal hedonists' attacks on tort damage awards, it is useful to take a step backward and consider how social scientists measure happiness.

Social scientists studying happiness use several measurement methodologies. The most common technique is to ask subjects to self-report their emotional state. This requires subjects to experience the emotion, accurately reflect on the emotional state, and properly express that reflection.[23] There are a number of ways to gather self-reported data. Some techniques, for instance, use single or periodic surveys to assess a subject's overall emotional state at a certain point in time. For instance, Ed Diener popularized the Satisfaction with Life Scale, where individuals are asked to rate on a seven-point scale the degree to which they agree or disagree with five related statements: "In most ways my life is close to my ideal"; "[t]he conditions of my life are excellent"; "I am satisfied with my life"; "[s]o far I have gotten the important things I want in life"; and "If I could live my life over, I would change almost nothing."[24] Alternatively, researchers measure subjective well-being with a single question, such as: "All things considered, how satisfied are you with your life as a whole these days?" or "[t]aken all together, would you say that you are very happy, pretty happy, or not too happy?"[25]

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22. *See, e.g.*, Jeremy A. Blumenthal & Peter H. Huang, *Positive Parentalism*, NAT'L L.J., Jan. 26, 2009, at 27, *available at* http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202427700551 (advocating doing so).

23. *See* Randy J. Larsen & Barbara L. Fredrickson, *Measurement Issues in Emotion Research*, *in* WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY, *supra* note 7, at 40, 44.

24. Ed Diener, Robert A. Emmons, Randy J. Larsen & Sharon Griffin, *The Satisfaction with Life Scale*, 49 J. PERSONALITY ASSESSMENT 71, 72 tbl.1 (1985).

25. *See* Alan B. Krueger & David A. Schkade, *The Reliability of Subjective Well-Being Measures*, 92 J. PUB. ECON. 1833, 1835–36 (2008) [hereinafter Krueger & Schkade, *Reliability*] (providing an overview of the literature).

A related line of research measures how much time people report experiencing various positive and negative feelings. Nancy Folbre, *Time Use and Living Standards*, 93 SOC. INDICATORS RES. 77 (2009); Daniel S. Hamermesh, *It's Time to "Do Economics" with Time-Use Data*, 93 SOC. INDICATORS RES. 65 (2009); Daniel Kahneman & Alan B. Krueger, *Developments in the Measurement of Subjective Well-Being*, J. ECON. PERSP., Winter 2006, at 3, 18–22 [hereinafter Kahneman & Krueger, *Developments*]; Alan B. Krueger, Daniel Kahneman, Claude Fischler, David Schkade, Norbert Schwarz & Arthur A. Stone, *Time Use and Subjective Well-Being in France and the U.S.*, 93 SOC. INDICATORS RES. 7 (2009); Alan B. Krueger, *Are*

Other survey techniques minimize the impact that memory plays in assessing happiness by gathering temporally specific data about the subject. The gold standard for measuring real-time emotion is the Experience Sampling Method Participants are prompted at random times throughout the day to record what they are doing and how they feel. Although expensive and difficult to implement, this method minimizes the impact of faulty memory on the results. The Day Reconstruction Method ("DRM") attempts to minimize both costs and the impact of memory on survey techniques. Social scientists using DRM ask participants to retrospectively categorize and summarize a day's worth of events on a number of different scales.[26]

These self-reported measures are occasionally supplemented or supplanted by objective observations of the subject's emotional state by interested or disinterested third parties or trained observers to code emotions.[27] Other researchers are using modern technology to measure neural activity to assess happiness.[28]

The self-report methods are the dominant feature in the happiness literature, with survey data leading the way. While easily implemented, these techniques raise certain reliability and validity concerns. That is, (1) are subjects reporting their "true" emotional states and beliefs about their overall well-being, and (2) can these results be replicated by a third party? In the remainder of this Part, we address the major categories of concern and the responses of hedonic researchers.

### *A. Definitions and Validity*

The first concern about measuring happiness might come from the fact that there is no clear agreed upon definition of happiness or well-being. For instance, some may think—as Jeremy Bentham and Thomas Hobbes believed—that happiness lies in the pursuit of pleasure, sensation, and human appetites.[29] Alternatively, some may think of happiness as well-being or "the expression of virtue—that is, in doing what is worth doing."[30] Put differently, happiness may be thought of as well-being, and for Aristotle, well-being was found in *eudaimonia*, flourishing, and fulfilling your true nature as a

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*We Having More Fun Yet? Categorizing and Evaluating Changes in Time Allocation*, 2 BROOKINGS PAPERS ON ECON. ACTIVITY 193 (2007) [hereinafter Krueger, *More Fun*]; Alan B. Krueger et al., *National Time Accounting: The Currency of Life*, *in* NATIONAL TIME ACCOUNTING & SUBJECTIVE WELL-BEING (Alan B. Krueger ed., forthcoming 2009); George Loewenstein, *That Which Makes Life Worthwhile*, *in* NATIONAL TIME ACCOUNTING & SUBJECTIVE WELL-BEING (Alan B. Krueger ed., forthcoming 2009); William Michelson, *On Adding Affect to Time-Diary Accounts*, 93 SOC. INDICATORS RES. 31 (2009).

26. Kruger & Schkade, *Reliability*, *supra* note 25, at 1834.

27. *See* Larsen & Frederickson, *supra* note 23, at 50.

28. Richard J. Davidson, *Well-Being and Affective Style: Neural Substrates and Biobehavioral Correlates*, 359 PHIL. TRANSACTIONS ROYAL SOC'Y B 1395 (2004).

29. *See* Richard M. Ryan & Edward L. Deci, *On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being*, 52 ANN. REV. PSYCHOL. 141, 143–44 (2001) ("[Thomas] Hobbes argued that happiness lies in the successful pursuit of our human appetites, and [the Marquis] DeSade believed that pursuit of sensation and pleasure is the ultimate goal of life. Utilitarian philosophers such as Bentham argued that it is through individuals' attempting to maximize pleasure and self-interest that the good society is built.").

30. *Id.* at 145; *see* Valerie Tiberius, *Well-Being: Psychological Research for Philosophers*, 5 PHIL. COMPASS 493, 494 (2006).

human being.[31] Still others believe that "a person would not be said to be living a good life, no matter how psychologically happy she was, unless her life met a certain moral standard."[32] Whether one is happy or flourishing is irrelevant. What matters is how one's life stacks up against an objective list of things worth doing.

These distinctions are not unique to philosophy. Psychologists fare no better at narrowing the definition of happiness; indeed, in large part they follow a similar taxonomy as philosophers.[33] In addition, psychologists consider the differences among the temporal measures of happiness: affect, mood, and life satisfaction. Affect refers to an experience of a feeling or an emotion. Affect can have a positive or negative valence and includes both states of high and low arousal.[34] The word "mood," in

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31. Tiberius, *supra* note 30, at 494.

32. *Id.*

33. *See id.* ("The research programs in social and personality psychology correspond roughly to the divisions among philosophical theories."). Psychologists Martin Seligman and Edward B. Royzman, for instance, classified traditional theories of happiness into three categories: (1) hedonism, which views happiness as experiencing positive subjective feelings; (2) desire theory, which views happiness as fulfilling subjective desires; and (3) objective list theory, which views happiness as achieving items from some objective list of worthwhile pursuits or things. *See* Martin E. P. Seligman & Ed Royzman, *Happiness: The Three Traditional Theories*, AUTHENTIC HAPPINESS, July 2003, http://www.authentichappiness.sas.upenn.edu/newsletter.aspx?id=49. Seligman introduced the concept of authentic happiness to try to combine all three traditional theories of happiness. "Authentic happiness comes from identifying and cultivating your most fundamental strengths and using them every day in work, love, play, and parenting." MARTIN E. P. SELIGMAN, AUTHENTIC HAPPINESS: USING THE NEW POSITIVE PSYCHOLOGY TO REALIZE YOUR POTENTIAL FOR LASTING FULFILLMENT, at xiii (2002).

What is authentic about authentic happiness is that "[w]hen well-being comes from engaging our strengths and virtues, our lives are imbued with authenticity." *Id.* at 9. Authentic happiness is thus about more than just experiencing a string of moments that feel good. An example of authentic happiness is being engaged in some activity that is valued, regardless of the presence or absence of positive subjective feelings. Christopher Peterson, Nansook Park & Martin E. P. Seligman, *Orientations to Happiness and Life Satisfaction: The Full Life Versus the Empty Life*, 6 J. HAPPINESS STUD. 25, 27 (2005). Authentic happiness conceives of three kinds of happy lives: a pleasant life, pursuing pleasurable feelings; a good life, utilizing one's character strengths to achieve gratification and engagement; and a meaningful life, utilizing one's character strengths in the service of something larger than oneself. SELIGMAN, *supra*, at 262–63; Seligman & Royzman, *supra*. A full life is a life that is at once pleasant, good, and meaningful. So, authentic happiness combines all three theories in the sense that a pleasant life conceives of happiness in a hedonic sense, a good life conceives of happiness in a desire sense, and a meaningful life conceives of happiness in an objective list sense. *See generally* Peter H. Huang & Rick Swedloff, *Authentic Happiness & Meaning at Law Firms*, 58 SYRACUSE L. REV. 335, 345–46 (2008).

34. James A. Russell, *A Circumplex Model of Affect*, 39 J. PERSONALITY & SOC. PSYCHOL. 1161, 1163–64 (1980) (describing the circumplex model of affect, which graphically depicts affect living inside a two dimensional plane with the horizontal axis depicting the valence dimension and the vertical axis indicating the arousal dimension). For example, happiness can refer to such "yippy skippy" notions as excitement and exuberance and such contemplative and meditative conceptions as contentment and serenity. Excitement and meditation might both produce positive valence to affect, but would be in opposite quadrants of an arousal scale. *See id.* at 1165–67.

contrast, means a relatively long-lasting affective or emotional state. Moods tend to be less specific, usually less intense, less likely to be triggered by specific events or stimuli, and longer lasting than emotions.[35] A person's "life satisfaction" measures a person's own perceived level of subjective well-being. In contrast to affect or mood, life satisfaction asks people to assess their lives as a whole.

Parenting illustrates aptly how affect, mood, and life satisfaction differ because the same activity or episode of parenting can entail self-reported measures of affect, mood, and life satisfaction that differ in their valence, intensity, or arousal. For example, few parents want to be awakened by a screaming baby in the middle of the night. This awakening could induce an immediate feeling of anger or annoyance. Such an episode could raise anxiety about the lack of sleep or countless other negative emotions. Simultaneously, a parent could be in a reasonably good mood for days before or after that event. Even during the event itself, despite causing some disruption in mood, the screaming baby cannot dampen excitement over a new job, or a feeling of accomplishment from a home-repair project. Moreover, even though taking care of a screaming baby may not create positive affect, simply holding the child might increase overall life satisfaction; and successfully getting a baby to stop crying and screaming may increase a parent's overall feeling of well-being. Parenting is an activity that also illustrates the difference between feelings-based and thoughts-based components of experiences.[36]

Given the multiplicity of definitions, it is unclear what test subjects are reporting when they answer questions about happiness and well-being. For instance, a heroin addict who just got her fix may report a high level of happiness and life satisfaction. But is this a valid definition of happiness? Certainly, this reporting gives some scholars concern about the validity of the data.[37] But those studying happiness respond by arguing that happiness is not objective, it is subjective—each person defines the characteristics of a good life. According to Ed Diener, "[t]his subjective definition of quality of life is democratic in that it grants to each individual the right to decide whether his or her life is worthwhile."[38] Therefore, according to such researchers, each individual is capable of answering for herself how happy she is. She and only she can tell us her "subjective well-being."

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35. ROBERT E. THAYER, THE BIOPSYCHOLOGY OF MOOD AND AROUSAL 14 (1989).

36. Mathew P. White & Paul Dolan, *Accounting for the Richness of Daily Activities*, 20 PSYCHOL. SCI. 1000, 1001, 1003 fig.1, 1004 fig.2, 1005 tbl.2 (2009) (providing data finding that that while survey respondents rated time with children as being relatively low in pleasure, they nonetheless thought of time with children as being rewarding and hence contributing to overall subjective well-being).

37. *See* Ed Diener, *Subjective Well-Being: The Science of Happiness and a Proposal for a National Index*, 55 AM. PSYCHOL. 34, 35–36 (2000); *see also* Jan Cornelius Ott, *Happiness, Economics and Public Policy: A Critique*, J. HAPPINESS STUD. (2008), http://www.springerlink.com/content/f4088110p13649k5/fulltext.pdf?page=1.

38. Diener, *supra* note 37, at 34; *see also* Jacolyn M. Norrish & Dianne A. Vella-Brodrick, *Is the Study of Happiness a Worthy Scientific Pursuit?*, 87 SOC. INDICATORS RES. 393, 400 (2007).

### B. Bias and Reliability

Even if surveys perfectly captured all of the meanings of happiness and test subjects completely understood the researchers' questions, there would still be concerns about whether the measures capture unbiased reports. Not surprisingly, measures of subjective well-being and other hedonic measures can be contaminated by a number of biases. For instance, (1) people can exaggerate their self-reported subjective well-being; (2) global and overall assessments of happiness are unduly influenced by momentary fluctuations in mood that result from weather or finding a dime on a photocopier before responding to questionnaires;[39] (3) people have an automatic tendency to normalize their answers to questions based upon implicit norms of comparison;[40] and (4) even question order in multiquestion surveys can influence reported answers.[41] Questions that use these "bounded labeled scales"—such as a seven-point semantic differential scale ranging from *very unhappy* (one) to *very happy* (seven) or a three-category scale consisting of *not too satisfied* (one), *satisfied* (two), and *very satisfied* (three)—are susceptible to a measurement bias: a tendency to renorm—that is, interpret those scales differently in different contexts. Hence, they will not differentiate between actual and spurious relativisms.[42] Thus, there is some concern that data collection methods are unreliable.

These concerns, however, are minimized in other ways. For instance, one can assume that positive and negative momentary fluctuations in affect are equally represented in the sample. By increasing the sample size, researchers can moderate the impact of these momentary influences. Further, by using consistent survey questions and surveys, researchers can minimize concerns about question order.

Moreover, a number of empirical findings provide support for the reliability of happiness data. First, there is empirical data indicating that self-reported happiness is positively correlated with observable positive behavior such as Duchenne smiling,[43] and verifiable neurological activity, such as greater left than right superior frontal brain

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39. Norbert Schwarz & Fritz Strack, *Evaluating One's Life: A Judgment Model of Subjective Well-Being*, *in* SUBJECTIVE WELL-BEING: AN INTERDISCIPLINARY PERSPECTIVE 27 (Fritz Strack, Michael Argyle & Norbert Schwarz eds., 1991).

40. Daniel Kahneman & Dale T. Miller, *Norm Theory: Comparing Reality to Its Alternatives*, 93 PSYCHOL. REV. 136 (1986).

41. *See generally* Betsey Stevenson & Justin Wolfers, *Happiness Inequality in the United States*, 37 J. LEGAL STUD. S33 (2008).

42. Christopher K. Hsee & Judy Ningyu Tang, *Sun and Water: On a Modulus-Based Measurement of Happiness*, 7 EMOTION 213 (2007). Two psychologists proposed a simple paper-and-pencil-friendly modulus-based scale of happiness to minimize such bias. *Id.*

43. Paul Ekman, Richard J. Davidson & Wallace V. Friesen, *The Duchenne Smile: Emotional Expression and Brain Physiology II*, 58 J. PERSONALITY & SOC. PSYCHOL. 342 (1990) (demonstrating that self-reports of happiness are correlated with Duchene smiles, which are smiles that involve orbicularis oculi muscles near our eyes); Paul Ekman, Wallace V. Friesen & Maureen O'Sullivan, *Smiles When Lying*, 54 J. PERSONALITY & SOC. PSYCHOL. 414 (1988) (finding that subtle differences in aspects of facial expression differentiated types of smiling); Kahneman & Krueger, *Developments*, *supra* note 25, at 9, tbl.1. *But see* Eva G. Krumhuber & Anthony S.R. Mansted, *Can Duchenne Smiles be Feigned? New Evidence on Felt and Fasle Smiles*, 9 EMOTION 807 (2009) (raising doubts concerning the reliability and validity of Duchenne smiles and questioning their use to identify genuine feelings of happiness).

activation.[44] Second, empirical happiness research data is consistent with expected correlations, such as findings that income and happiness are correlated;[45] health and happiness are correlated;[46] trust and happiness are correlated;[47] and unemployment and unhappiness are correlated.[48] Third, a pair of economists recently tested for the reliability of subjective well-being measures over a two week period in a sample of 229 employed women and found that both overall life satisfaction and experienced affect derived from the DRM had tested and retested serial correlations ranging from 0.50 to 0.70.[49] In particular, the correlation of responses about net affect (which is defined as duration-weighted positive affect less negative affect) taken two weeks apart was 0.64.[50] The correlation of responses about life satisfaction taken two weeks apart was 0.59.[51]

Given this research, most social scientists believe that hedonic research is reliable and consistent. For example, George Loewenstein and Peter Ubel and their various coauthors conducted research which: (1) tested for and could not find any evidence that Parkinson's disease patients exaggerated their subjective well-being;[52] (2) tested for and found identical patterns of both adaptation and underprediction of such adaptation for both global and momentary subjective well-being measures;[53] and (3) tested for and found existence of scale recalibration,[54] but also misprediction of affect, even after

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44. Nathan A. Fox & Richard J. Davidson, *Patterns of Brain Electrical Activity During Facial Signs of Emotion in 10-Month-Old Infants*, 24 DEVELOPMENTAL PSYCHOL. 230 (1988) (finding that ten-month-old infants display greater activation of their left rather than right frontal area of their brains upon seeing videotapes of actresses exhibiting happy facial expressions); Heather L. Urry, Jack B. Nitschke, Isa Dolski, Daren C. Jackson, Kim M. Dalton, Corrina J. Mueller, Melissa A. Rosenkranz, Carol D. Ryff, Burton H. Singer & Richard J. Davidson, *Making a Life Worth Living: Neural Correlates of Well-Being*, 15 PSYCHOL. SCI. 367 (2004) (finding that for a sample of eighty-four adults ranging in age from fifty-seven to sixty higher self-reported happiness was correlated with greater left than right superior frontal activation).

45. Angus Deaton, *Income, Health, and Well-Being Around the World: Evidence from the Gallup World Poll*, J. ECON. PERSP., Spring 2008, at 53 (finding based upon data from 132 countries that a strong relationship between average life satisfaction and per capita national income, and high-income countries report greater life-satisfaction than low-income countries).

46. David G. Blanchflower & Andrew J. Oswald, *Hypertension and Happiness Across Nations*, 27 J. HEALTH ECON. 218 (2008) (finding that happier nations report systematically lower levels of hypertension based upon data from sixteen countries).

47. John F. Helliwell, *How's Life? Combining Individual and National Variables to Explain Subjective Well-Being*, 20 ECON. MODELING 331 (2003) (finding, based upon data from fifty countries, that happiness and social capital are related).

48. *See, e.g.*, Lucas et al., *supra* note 6.

49. Krueger & Schkade, *Reliability*, *supra* note 25, at 1843.

50. *Id.* at 1833.

51. *Id.*

52. Dylan M. Smith, Norbert Schwarz, Todd R. Roberts & Peter A. Ubel, *Why Are You Calling Me? How Study Introductions Change Response Patterns*, 15 QUALITY LIFE RES. 621 (2006).

53. Jason Riis, George Loewenstein, Jonathon Baron, Christopher Jepson, Angela Fagerlin, & Peter A. Ubel, *Ignorance of Hedonic Adaptation to Hemodialysis: A Study Using Ecological Momentary Assessment*, 134 J. EXPERIMENTAL PSYCHOL.: GEN. 3 (2005).

54. Peter A. Ubel, Aleksandra Jankovic, Dylan Smith, Kenneth M. Langa & Angela Fagerlin, *What is Perfect Health to an 85-Year-Old?: Evidence for Scale Recalibration in*

controlling for that scale recalibration.[55] Based upon data from these and other studies that Loewenstein and Ubel have conducted, they concluded "that the surprising emotional stability people show across a wide range of circumstances reflects true adaptation to those circumstances and is not a mere result of response bias or scale recalibration."[56]

* * *

In the end, it may be that we are stuck with a thin measure of happiness, which only takes into account a subjective evaluation of momentary affect and subjective well-being. This measurement may suffice for some projects, but may not suffice for measuring tort damages. We will return to this theme later in the paper. For our purposes here, we accept that it is possible to reliably measure happiness and that these measurements have something to tell us about the human condition.

## II. ADAPTATION AND AFFECTIVE FORECASTING

With these measurement issues in mind, we can now return to the legal hedonists' central arguments. They argue that, on the one hand, pain, suffering, and loss of enjoyment of life are illusory or fleeting injuries, because individuals will adapt to any negative emotional or physical state. On the other hand, they assume that jurors are incapable of granting these damages, because they cannot adequately predict the impact of the injury on the individuals.

The legal hedonists' arguments rely on a broad belief in the strength, power, and importance of hedonic adaptation. In this Part, we take a closer look at hedonic adaptation and pay particular attention to the meaning and measurement of happiness. We first lay out the history of the research on hedonic adaptation and the recent studies that undermine the earlier findings. We then return to a discussion of affective forecasting.

### *A. Early Theory and Evidence of Hedonic Adaptation*

In its broadest sense, adaptation "refers to any action, process, or mechanism that reduces the effects (perceptual, physiological, attentional, motivational, hedonic, and so on) of a constant or repeated stimulus."[57] When a person steps from a dark building to the bright sunlight, he will likely squint and turn away from the sun, his pupils will contract, and neural processes will allow his brain to understand the information in the new setting.[58] Each of these behaviors is part of the adaptive physiological process

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*Subjective Health Ratings*, 43 MED. CARE 1054 (2005).

55. Heather P. Lacey, George Loewenstein, Jason Riis, Angela Fagerlin, Dylan M. Smith & Peter A. Ubel, *Are They Really Happy? Exploring Scale Recalibration in Estimates of Well-Being*, 27 HEALTH PSYCHOL. 669, 673–74 (2008).

56. George Loewenstein & Peter A. Ubel, *Hedonic Adaptation and the Role of Decision and Experience Utility in Public Policy*, 92 J. PUB. ECON. 1795, 1801 (2008).

57. Frederick & Loewenstein, *supra* note 7, at 302.

58. *See id.*

people use in reaction to bright light.[59] Hedonic adaptation is the notion that people will also adapt to stimuli that are relevant to emotion or affect.[60]

Psychologists have long hypothesized that physiological and psychological adaptation serve important evolutionary and biological functions. First, researchers theorized that adaptation protects humans by reducing the physiological and psychological impact of external stimuli.[61] People sweat to reduce the impact of heat; our eyes dilate to reduce the impact of the sun. Similarly, our emotions may adapt to protect our bodies from "dangerous physiological and psychological reactions that occur with prolonged emotional states."[62] Hedonic states (hunger, thirst, pain, excitement, contentment) may guide humans to needs such as food or companionship.[63] But prolonged periods in an excited emotional state could cause metabolic disease, hypertension, ulcers, or suppression of the immune system.[64] Thus, according to this theory, individuals must adapt to prevent such damage. Second, adaptation protects humans by ensuring that changes in our environment receive our appropriate immediate attention. In general terms, stimuli that have existed in an individual's environment are likely to pose less of a threat than new stimuli, which require greater attention. In other words, one becomes habituated to the old stimuli and reacts more strongly to new stimuli.[65] The same may be true for emotional stimuli. Over time, old stimuli receive less attention and are less important.

For these reasons, scholars long predicted the phenomenon and process of hedonic adaptation, but had no strong empirical support. In 1978, Philip Brickman and two coauthors set out to find that missing empirical data. In the oft-cited article, *Lottery Winners and Accident Victims: Is Happiness Relative?*,[66] the authors found that lottery winners and controls did not significantly differ in their self-reported past, present, and future happiness ratings.[67] Brickman and his coauthors conducted short interviews with twenty-two winners of major lotteries, twenty-nine paralyzed accident victims, and twenty-two control subjects.[68] They found that lottery winners and controls did not significantly differ in their self-reported past, present, and future happiness ratings.[69] But, the study revealed that accident victims and controls did significantly differ in their past and present, but not future self-reported happiness ratings.[70] In particular, the study found that accident victims exhibited a nostalgia effect of recalling their past as

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59. *See id.*

60. *See id.*

61. *See id.* at 303.

62. Richard E. Lucas, *Long-Term Disability Is Associated with Lasting Changes in Subjective Well-Being: Evidence from Two Nationally Representative Longitudinal Studies*, 92 J. PERSONALITY & SOC. PSYCHOL. 717, 718 (2007).

63. *See* Frederick & Loewenstein, *supra* note 7, at 303.

64. *Id.* As 1978 economics Nobel laureate Herbert Simon pointed out, emotions focus our attention upon a specific item from a vast sea of sensory inputs and help direct and prioritize our scarce decision-making resources to address particular tasks requiring completion. Herbert A. Simon, *Motivational and Emotional Controls of Cognition*, 74 PSYCHOL. REV. 29 (1967).

65. Lucas, *supra* note 62, at 718.

66. Brickman et al., *supra* note 7.

67. *Id.* at 920, 921 tbl.1.

68. *Id.* at 917.

69. *Id.* at 920, 921 tbl.1.

70. *Id.*

having been happier than controls did.[71] The authors of the study themselves emphasized, "that the paraplegic rating of present happiness is still above the midpoint of the scale and that the accident victims did not appear nearly as unhappy as might have been expected."[72] From this, Brickman and his colleagues concluded that individuals adapt to bad and good events and mispredict the impact that these events will have on their future happiness.

But the Brickman study has deep methodological problems. As the authors themselves conceded:

> [O]ur data are sharply limited by the fact that they were obtained at a single point in time and do not trace out the hypothetical temporal course of adaptation. When we broke down our sample by the time that had elapsed since the lottery or the accident, we found no changes in their ratings. . . . A larger study, preferably longitudinal, is needed to specify the exact parameters that determine how adaptation level effects change over time.[73]

Despite the fact that this study was a small sample and had significant methodological challenges, it inspired a new generation of scholars to think critically about happiness and to claim that people adapt to pleasant and unpleasant life circumstances. Early researchers, using the same cross-sectional methodology confirmed Brickman's findings of adaptation.[74] Studies showed adaptation to, among other things, parapalegia,[75] loss of limbs by child and adolescent cancer victims,[76] dialysis,[77] and loss of loved ones.[78]

From this early theory and research on adaptation, scholars concluded that individuals have set levels of happiness that have little correlation to their life circumstances.[79] Further, they concluded that individuals deviate from those set levels

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71. *Id.* at 921.

72. *Id.* at 921. They also noted that because:

> 10 paraplegics refused to answer the question of future happiness (versus 3 winners and 1 control), the results for this question must be viewed most cautiously. If refusal to answer represents apprehension, inclusion of these respondents would have lowered the victim mean and perhaps the winner mean relative to the control group.

*Id.*

73. *Id.* at 924.

74. Lucas, *supra* note 62, at 718–19 (reviewing the primary studies claiming to support adaptation).

75. Camille B. Wortman & Roxane Cohen Silver, *Coping with Irrevocable Loss*, *in* 6 CATACLYSMS, CRISES AND CATASTROPHES: PSYCHOLOGY IN ACTION 189 (Gary R. VandenBos & Brenda K. Bryant eds., 1987).

76. Vida L. Tyc, *Psychological Adaptation of Children and Adolescents with Limb Deficiencies: A Review*, 12 CLINICAL PSYCHOL. REV. 275 (1992).

77. Riis et al., *supra* note 53.

78. *See* Frederick & Loewenstein, *supra* note 7, at 312–13 (reviewing literature).

79. Researchers describe this adaptive ability alternatively as the hedonic treadmill, *see* Brickman & Campbell, *supra* note 8, at 289; the happiness set point, *see* DIENER & BISWAS-DIENER, *supra* note 1, at 145–46; a psychological immune system, *see* Daniel T. Gilbert, Elizabeth C. Pinel, Timothy D. Wilson, Stephen J. Blumberg & Thalia P. Wheatley, *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 J. PERSONALITY & SOC.

based on exogenous events but return after some period of adaptation. In short, these scholars concluded that hedonic adaptation is "inevitable, and no change in life circumstance should ever lead to lasting changes in happiness."[80]

### *B. Beyond Brickman: A More Thorough Look at Adaptation*

Much has changed since Brickman and his coauthors conducted their original study of a small number of lottery winners and accident victims. For one thing, using the same method as those early studies, researchers have found that adaptation is not as universal as once believed. Second, using nationally representative panel data, researchers have been able to track adaptation over time. These longitudinal studies report that adaptation is not as complete as previously claimed. More importantly, even where there is evidence of hedonic adaptation, later studies have shown that injured individuals would still prefer to live without injury. In this part, we review this recent research and consider the ramifications on the theories of adaptation.

#### 1. Ubiquity of Adaptation

First, a number of studies have concluded that adaptation is not ubiquitous. Even those who believe strongly in adaptation concede that individuals do not adapt to certain to injuries or disorders that cause chronic pain or result in progressive and degenerative disorders, such as rheumatoid arthritis or multiple sclerosis.[81] "[I]n contrast to paralysis victims, whose condition is likely to remain constant over time, sufferers of such debilitating diseases must cope not only with the disabilities resulting from the cumulative deterioration they have thus far suffered but with new impairments as their disease progresses."[82] Perhaps surprisingly, there is also evidence that if an individual holds out some hope of recovering from a severe injury, the individual does not adapt to that injury.[83] That is, even the prospect of recovery can impede adaptation.

Researchers have similarly found evidence that individuals do not adapt in noninjury domains.[84] Recent studies have concluded that individuals who get

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PSYCHOL. 617, 621–33 (1998); or simply as hedonic adaptation, *see* Frederick & Loewenstein, *supra* note 7. But each of these theories contains the same core set of beliefs, namely, that individuals have a level of happiness that has little correlation to their life circumstances and that individuals may deviate from that level based on exogenous events, but return after some period of adaptation.

80. Ed Diener, Richard E. Lucas & Christine Napa Scollon, *Beyond the Hedonic Treadmill: Revising the Adaptation Theory of Well-Being*, 61 AM. PSYCHOLOGIST 305, 308 (2006).

81. Frederick & Loewenstein, *supra* note 7, at 312; Richard F. Antonak & Hanoch Livneh, *Psychosocial Adaptation to Disability and Its Investigation Among Persons with Multiple Sclerosis*, 40 SOC. SCI. & MED. 1099 (1995) (reviewing literature about psychosocial adaptation to disability among individuals with multiple sclerosis, identifying research problems, and suggesting future research); Craig A. Smith & Kenneth A. Wallston, *Adaptation in Patients with Chronic Rheumatoid Arthritis: Application of a General Model*, 11 HEALTH PSYCHOL. 151 (1992) (suggesting existence of a vicious cycle of helplessness appraisals, passive coping with pain, and psychosocial impairment preventing adaptation to rheumatoid arthritis).

82. Frederick & Loewenstein, *supra* note 7, at 312.

83. *See id.*; Ubel & Loewenstein, *supra* note 5, at S199, S199 n.2.

84. Richard E. Lucas, *Adaptation and the Set-Point Model of Subjective Well-Being: Does Happiness Change After Major Life Events?*, 16 CURRENT DIRECTIONS PSYCHOL. SCI. 75 (2007).

divorced,[85] become unemployed,[86] lose a loved one,[87] or win the lottery,[88] on average, do not return to their previous happiness levels; instead, such individuals experience significant, lasting changes in their subjective well-being.

Likewise, based upon longitudinal data, two economists recently concluded that people do not adapt completely to money. Betsey Stevenson and Justin Wolfers

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85. Lucas, *supra* note 7. Here, Lucas tracked data from a longitudinal eighteen-year panel study of more than 30,000 Germans and found that satisfaction drops as one approaches divorce and then gradually rebounds over time. *Id.* But the return to happiness baselines is not complete. Furthermore, the association between divorce and life satisfaction results from both preexisting differences in people and lasting changes following divorce. *Id.*

86. *See, e.g.*, FREY, *supra* note 1, at 45–53 (summarizing how unemployment affects happiness). An early study of British people offered econometric regression evidence that is consistent with the common-sense notion that being unemployed is a major economic source of human distress and psychiatric stress. *See* Andrew E. Clark & Andrew J. Oswald, *Unhappiness and Unemployment*, 104 ECON. J. 648 (1994). The authors of this groundbreaking study concluded that "joblessness depresse[d] well-being more than any other single characteristic (including important negative ones such as divorce and separation)." *Id.* at 655.

Another longitudinal study found that not only current unemployment, but also past unemployment, reduces the current well-being of individuals, whether those individuals are presently employed or not. *See* Andrew E. Clark, Yannis Georgellis & Peter Sanfey, *Scarring: The Psychological Impact of Past Unemployment*, 68 ECONOMICA 221 (2001)[hereinafter Clark et al., *Scarring*]. In other words, past unemployment has a psychologically scarring effect on people, regardless of whether or when they regain employment. A fifteen-year longitudinal study also found that, on average, the people studied never completely returned to their pre-unemployment levels of satisfaction, even after they were reemployed; moreover, in contrast with expectations from adaptation theories, individuals who had been unemployed in the past did not react any less negatively to a new bout of unemployment. *See* Lucas et al., *supra* note 6. Three large-scale European longitudinal studies also found little evidence of habituation to unemployment in Europe in the 1990s. *See* Andrew E. Clark, *A Note on Unhappiness and Unemployment Duration*, 52 APPLIED ECON. Q. 291 (2006). Finally, two studies based upon data for over a quarter of a million people across twelve European countries and the United States found that average self-reported happiness is negatively correlated across time with just the rates of unemployment and inflation, and that unemployment is more harmful than inflation in terms of reducing subjective well-being. *See* Rafael Di Tella, Robert J. MacCulloch & Andrew J. Oswald, *Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness*, 91 AM. ECON. REV. 335 (2001); Rafael Di Tella, Robert J. MacCulloch & Andrew J. Oswald, *The Macroeconomics of Happiness*, 85 REV. ECON. & STAT. 809 (2003); *see also* Clark et al., *Scarring*, *supra*.

87. *See* Andrew J. Oswald & Nattavudh Powdthavee, *Death, Happiness, and the Calculation of Compensatory Damages*, 38 J. LEGAL STUD. 217S (2008) (examining the amounts of mental distress that bereavement causes and finding that the death of a spouse causes the most distress, followed by the death of a child, then the death of a parent).

88. *See* Jonathan Gardner & Andrew J. Oswald, *Money and Mental Well-Being: A Longitudinal Study of Medium-Sized Lottery Wins*, 26 J. HEALTH ECON. 49 (2007). Gardner and Oswald tracked a random sample of 137 British individuals longitudinally and compared those who had won medium-sized lottery amounts of between £1,000 and £120,000 (up to approximately $200,000) with two control groups, those who had won nothing and those who had won small amounts. The study concluded that those who had won medium-sized lottery amounts exhibited statistically significant better psychological health and mental well-being improvements two years after winning.

analyzed multiple, rich datasets and established a significant positive link between gross domestic product and average levels of subjective well-being across countries.[89] In addition, their analysis found no evidence of a satiation level of national income beyond which wealthier countries have no further increases in subjective well-being.[90] They also demonstrated a powerful role for economic growth in raising happiness upon reexamining the relationship between changes in subjective well-being and income over time within countries. Finally, they showed that national income is correlated positively with not just happiness, but also such other indicators and types of positive

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89. Betsey Stevenson & Justin Wolfers, *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox*, 1 BROOKINGS PAPERS ON ECON. ACTIVITY 1 (2008). Stevenson's and Wolfers's studies are a reaction to the research of Richard Easterlin, who initially raised and investigated the related question of whether raising the incomes of all increases the happiness of all. *See* Richard A. Easterlin, *Does Economic Growth Improve the Human Lot? Some Empirical Evidence*, *in* NATIONS AND HOUSEHOLDS IN ECONOMIC GROWTH: ESSAYS IN HONOR OF MOSES ABRAMOVITZ 89 (Paul A. David & Melvin W. Reder eds., 1974); Richard A. Easterlin, *Will Raising the Incomes of All Increase the Happiness of All?*, 27 J. ECON. BEHAV. & ORG. 35 (1995). His answer became famously known as the Easterlin paradox, the claim that no link exists between a society's level of economic development and the average level of happiness in that society. Moreover, Easterlin found a satiation level of national income beyond which a nation experienced no further increase in average subjective well-being. Lastly, Easterlin declared that he found no evidence that, for any fixed point in time, higher levels of national income are correlated with higher levels of average subjective well-being. These assertions become even more surprising upon realizing that, for any fixed moment in time and in any particular country, richer individuals are happier than poorer ones.

Easterlin's "paradox quickly became a social science classic, cited in academic journals and the popular media. It tapped into a near-spiritual human instinct to believe that money can't buy happiness. As a 2006 headline in The Financial Times said, 'The Hippies Were Right All Along About Happiness.'" David Leonhardt, *Money Doesn't Buy Happiness. Well, on Second Thought...*, N.Y. TIMES, Apr. 16, 2008, at C1. A veritable cottage industry of literature sprouted up attempting to explain Easterlin's paradox. *See, e.g.*, Daniel Kahneman, Alan B. Krueger, David Schkade, Norbert Schwarz & Arthur A. Stone, *Would You Be Happier If You Were Richer? A Focusing Illusion*, 312 SCI. 1908 (2006). Three of the leading explanations for Easterlin's paradox appeal to: (1) hedonic adaptation due to being on a hedonic treadmill, (2) happiness depends on relative as opposed to absolute income levels, or (3) happiness depends upon omitted variables that represent nonincome factors. *See* Robert H. Frank, *Should Public Policy Respond to Positional Externalities?*, 92 J. PUB. ECON. 1777 (2008). *Compare* Stephen Wu, *Adapting to Heart Conditions: A Test of the Hedonic Treadmill*, 20 J. HEALTH ECON. 495 (2001), *with* Andrew E. Clark, Paul Frijters & Michael A. Shields, *Relative Income, Happiness and Utility: An Explanation for the Easterlin Paradox and Other Puzzles*, 46 J. ECON. LITERATURE 95 (2008), *and* Rafael Di Tella & Robert MacCulloch, *Gross National Happiness as an Answer to the Easterlin Paradox?*, 86 J. DEV. ECON. 22 (2008). The widespread acceptance of Easterlin's empirical conclusions had led many to question policies fostering economic growth. *See, e.g.*, Carol Graham, *Insights on Development from the Economics of Happiness*, 20 WORLD BANK RES. OBSERVER 201 (2005); Christopher K. Hsee, Reid Hastie & Jingqiu Chen, *Hedonomics: Bridging Decision Research with Happiness Research*, 3 PERSP. PSYCHOL. SCI. 224 (2008).

90. Stevenson & Wolfers, *supra* note 89; *see also* Angus Deaton, *Income, Health, and Well-Being Around the World: Evidence from the Gallup World Poll*, J. ECON. PERSP., Spring 2008, at 53, 55 (providing related findings); Betsey Stevenson & Justin Wolfers, *The Paradox of Declining Female Happiness*, 1 AM. ECON. J. 190 (2009).

affect, such as smiling and laughing, but appears uncorrelated to worry, sadness, boredom, depression, or anger.[91]

Although each of these various domains is interesting for purposes of evaluating the ubiquity of adaptation, unemployment and money are of particular importance here.[92] This is because people who become severely disabled as the result of a tort are often unable to find employment; that is, they become unemployed. While such individuals usually receive compensation for their lost income, empirical data of psychological scarring and permanent emotional harm due to unemployment even after such individuals become reemployed implies that such individuals also should receive additional compensation for their noneconomic losses. Likewise, if people do not find a satiation point for money, it may be that monetary damage awards can have an important impact on a victim's happiness.

### 2. Strength of Adaptation

There are further questions about rates and completeness of adaptation from injury. Even for those disabilities and injuries to which individuals adapt, adaptation is only important in the context of noneconomic damages if it is relatively quick and relatively complete. Recent large-scale longitudinal studies, using nationally representative panel data, call into question the strength of adaptation in domains where researchers had already identified significant adaptation. These longitudinal studies offer the promise of a superior adaptation tracking method.[93]

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91. *See* Justin Wolfers, Op-Ed., *The Economics of Happiness, Part 6: Delving into Subjective Well-Being*, Freakonomics, N.Y. TIMES.COM, Apr. 25, 2008, http://freakonomics.blogs.nytimes.com/2008/04/25/the-economics-of-happiness-part-6-delving-into-subjective-well-being/.

92. *See generally* Scott A. Moss & Peter H. Huang, *How the New Economics Can Improve Employment Discrimination Law, and How Economics Can Survive the Demise of the "Rational Actor"*, 51 WM. & MARY L. REV. 183 (2009) (developing implications of happiness research about how courts should adjudicate in employment discrimination cases).

93. Lucas, *supra* note 62, at 719. In a cross-sectional study, researchers collect data at a single point in time and compare control and experimental groups. For instance, researchers compared the happiness levels of those with a specific injury (or those who had been divorced, widowed, won the lottery, etc.) to people who had not experienced whatever event was the focus of the study. In these studies, researchers did not know the participants' pre-event level of subjective well-being. *See id.* As a result, the researchers could not compare pre-event happiness to postevent happiness in the same population. Moreover, even where researchers tracked population groups over time, the researchers for these studies often recruited "individuals because they have experienced or are likely to experience the specific life event in question. Thus, participants are usually aware of the purpose of the study and may over- or under[-]report adaptation because of demand characteristics." *Id.* That is, participants may alter their answers due to the nature of the studies themselves.

In contrast, in the recent longitudinal studies, researchers looked at the same panel of individuals over time. Specifically, researchers looked at adaptation in longitudinal studies by using large-scale national panel data from Germany and Great Britain. These surveys track large numbers of individuals over multiple years and ask the same (or similar) set of questions each year. Among other questions, respondents to these national surveys were asked to rank their happiness on a numerical scale (one to ten in Great Britain and one to seven in Germany). *Id.*

In two recent studies, social scientists used longitudinal data to determine whether individuals adapt to disability.[94] In the first, Richard Lucas tracked 2272 British and 1679 German participants both before and after the onset of a long-term disability.[95] Using the German Socio-Economic Panel, Lucas tracked 675 respondents who had been officially certified as "having a reduced capacity to work or being severely handicapped" for an average of 7.18 years before injury and 7.39 years after injury.[96] With the British Household Panel Study, Lucas tracked 272 participants for an average of 3.48 years before and 5.31 years after the onset of injury.[97] Not surprisingly, participants in these studies reported moderate to large drops in life satisfaction and corresponding increases in psychological distress post injury. More surprisingly, although participants reported partial adaptation to the effects of psychological distress, the life satisfaction scores did not rebound over time.[98]

In the second study, Andrew Oswald and Nattavudh Powdthavee provided only modestly more support for hedonic adaptation to injury. Utilizing data from the British Household Panel Survey, these scholars concluded that individuals who become disabled go on to exhibit some degree of recovery in mental well-being, but found that adaptation to severe disability is far from complete.[99] Oswald and Powdthavee found that self-reported happiness for those with severe disability rebounded less than thirty percent from their happiness nadirs.[100] Their findings for moderate disability are only slightly more impressive—a self-report of fifty percent adaptation.[101] They concluded that

> [t]he data do not support the idea that after tragedy there is routinely a return to the old well-being level: here in illustrative calculations we estimate the degree of adaptation to be of the order of 30% to 50%. These results could be read alongside the old, and highly-cited, cross-section work of Brickman et al. (1978), which has come to be seen by many writers as claiming that human beings completely recover psychologically from even extreme disability.[102]

### 3. Importance of Adaptation

Lastly, apart from the lack of universality and strength of adaptation, it does not seem that adaptation is that important in monetizing injuries.

Even when people report hedonic adaptation and a return toward preinjury levels of happiness, they are still willing to sacrifice significant amounts of their life spans to return their lost function. For instance, in one study, researchers asked colostomy patients to imagine that they had ten years left to live and then asked the patients how

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94. *See id.*; Andrew J. Oswald & Nattavudh Powdthavee, *Does Happiness Adapt? A Longitudinal Study of Disability with Implications for Economists and Judges*, 92 J. PUB. ECON. 1061 (2008).

95. Lucas, *supra* note 62.

96. *Id.* at 719–20 (internal quotation marks omitted).

97. *Id.*

98. *Id.* at 726.

99. Oswald & Powdthavee, *supra* note 94.

100. *Id.*

101. *Id.*

102. *Id.* at 1072.

much of that time they would give up to live without a colostomy. On average, the respondents reported that they would give up nineteen months of life to return to life pre-colostomy.[103] In another study, dialysis patients reported a willingness to give up over half of their remaining years to have normal kidney function.[104] These studies indicate, first, that people strongly prefer to be healthy, even if their day-to-day level of affect has returned to preinjury levels. Further, the studies reveal either that people care about things other than happiness or that current happiness measures do not capture something fundamental about well-being. A rebound in happiness or a decrease in psychological distress does not mean that people have overcome their injuries, learned to ignore their pain, or feel as healthy and complete as they did preinjury. Because individuals care about things other than happiness, one's level of perceived happiness may not be that important in monetizing injury.

These findings buttress the claim that happiness is a deep concept and that "there are many things that matter to people in their lives independent of . . . their long-term emotions."[105] In addition to, or quite possibly even completely besides, the presence of positive affect and the absence of negative affect, people want additional desiderata: (1) capabilities;[106] (2) emotional and experiential variety, as captured in the famous sentiment that it would be better to be a dissatisfied human being than a satisfied pig;[107] and (3) altruistic and moral experiences, such as taking care of one's kids, elderly parents, or a bedridden spouse or close relative.[108] Individuals might also want emotional responses beyond happiness to feel that they are living well. In particular, people may care about: (1) meaning, as understood in at least one of these four possible ways: resolving uncertain preferences, extending oneself either socially or temporally, asserting one's free will, or constructing autobiographical narratives;[109] and (2) brief episodes of intense emotions, such as momentary spikes of sorrow and grief over the loss of loved ones that can strike at any particular time.

These findings are not necessarily inconsistent with the earlier cross-sectional studies. As Lucas noted, these findings "only contradict the standard interpretation of this evidence."[110] The early data showed that "individuals with disabilities are moderately happy and do not have high rates of psychological disorders."[111] From this information, researchers drew broad conclusions about hedonic adaptation. In light of

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103. Dylan M. Smith, Ryan L. Sherriff, Laura Damschroder, George Loewenstein & Peter A. Ubel, *Misremembering Colostomies? Former Patients Give Lower Utility Ratings than Do Current Patients*, 25 HEALTH PSYCHOL. 688, 691 (2006).

104. Loewenstein & Ubel, *supra* note 56, at 1799.

105. Ubel & Loewenstein, *supra* note 5, at S205.

106. MARTHA C. NUSSBAUM, WOMEN AND HUMAN DEVELOPMENT: THE CAPABILITIES APPROACH (2000); AMARTYA SEN, COMMODITIES AND CAPABILITIES (1999).

107. This was first captured by John Stuart Mill, *see* JOHN STUART MILL, UTILITARIANISM (1863), and later endorsed by James Griffin, *see* JAMES GRIFFIN, WELL-BEING: ITS MEANING, MEASUREMENT, AND MORAL IMPORTANCE (1989); SHELLY KAGAN, NORMATIVE ETHICS 32 (1998); JOSEPH RAZ, ETHICS IN THE PUBLIC DOMAIN: ESSAYS IN THE MORALITY OF LAW AND POLITICS (1994).

108. Ubel & Loewenstein, *supra* note 5, at S207.

109. Niklas Karlsson, George Loewenstein & Jane McCafferty, *The Economics of Meaning*, 30 NORDIC J. POL. ECON. 61 (2004).

110. Lucas, *supra* note 62, at 726.

111. *Id.*

the longitudinal studies, one could conclude instead that even if people with disabilities are relatively happy and free from psychological distress, they are not necessarily *as satisfied with their lives* as they were before their injury.

### 4. Conclusions about Adaptation

In light of this evidence, a number of scholars have called for the hedonic set point theory and the notion of a hedonic treadmill to be revised.[112] Most importantly, one of the fathers of the new science of happiness, 2002 economics Nobel Laureate Daniel Kahneman, recently publicly changed his views about hedonic adaptation, stating, in part:

> The central question for students of well-being is the extent to which people adapt to circumstances. Ten years ago, the generally accepted position was that there is considerable hedonic adaptation to life conditions. The effects of circumstances on life satisfaction appeared surprisingly small: The rich were only slightly more satisfied with their lives than the poor, the married were happier than the unmarried but not by much, and neither age nor moderately poor health diminished life satisfaction. Evidence that people adapt—though not completely—to becoming paraplegic or winning the lottery supported the idea of a "hedonic treadmill": we move but we remain in place. The famous Easterlin paradox seemed to nail it down: Self-reported life satisfaction has changed very little in prosperous countries over the last fifty years, in spite of large increases in the standard of living. . . .
>
> Social scientists rarely change their minds, although they often adjust their position to accommodate inconvenient facts. But it is rare for a hypothesis to be so thoroughly falsified. Merely adjusting my position would not do; although I still find the idea of an aspiration treadmill attractive, I had to give it up.
>
> To compound the irony, recent findings from the Gallup World Poll raise doubts about the puzzle itself. The most dramatic result is that when the entire range of human living standards is considered, the effects of income on a measure of life satisfaction (the "ladder of life") are not small at all. We had thought income effects are small because we were looking within countries. The GDP differences between countries are enormous and highly predictive of differences in life satisfaction. In a sample of over 130,000 people from 126 countries, the correlation between the life satisfaction of individuals and the GDP of the country in which they live was over .40—an exceptionally high value in social science. Humans everywhere, from Norway to Sierra Leone, apparently evaluate their life

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112. *See, e.g.*, Diener et al., *supra* note 80. Ed Diener and his coauthors proposed five changes to the theory of the hedonic treadmill. First, an individual's set point is not hedonically neutral. Second, individuals differ in their set points, partly based upon their temperaments. Third, one individual can have several happiness set points, meaning that such different components of subjective well-being as pleasant emotions, unpleasant emotions, and life satisfaction can move in different directions. Fourth, and perhaps most importantly, subjective well-being set points can change under certain conditions. Fifth, individuals also differ in their adaptation to events, so that some people change their hedonic set point and others do not change their hedonic set point in response to a particular external event. *Id.*

> by a common standard of material prosperity, which changes as GDP increases. The implied conclusion—that citizens of different countries do not adapt to their level of prosperity—flies against everything we thought we knew ten years ago. We have been wrong and now we know it. I suppose this means that there is a science of well-being, even if we are not doing it very well.[113]

Nonetheless, as Lucas notes,[114] there may be a way to reconcile this new longitudinal data with older cross-sectional studies. But for our purposes here, it is simply important to note that the story of adaptation is still being told and we do not know the strength or the ubiquity of hedonic adaptation, if it exists at all. One conclusion to draw is that happiness, life satisfaction, and well-being are quite complex.[115] More importantly, these new data highlight that there is no clearly established theoretical consensus over whether people adapt, why people adapt, at what rate they adapt, when they adapt, or what increases or decreases rates of adaptation.[116] All of which points to a more

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113. Daniel Kahneman, *What Constitutes Life Satisfaction?*, *in* WHAT HAVE YOU CHANGED YOUR MIND ABOUT?: TODAY'S LEADING MINDS RETHINK EVERYTHING 197, 199–200 (John Brockman ed., 2009).

114. *See supra* text accompanying notes 110–11.

115. Further complicating the notion of the hedonic treadmill are recent studies suggesting that individuals can increase their happiness with seemingly minor events. "[W]hile major events may not provide lasting increases in well-being, certain seemingly minor events—such as attending religious services or exercising—may do so by providing small but frequent boosts: if people engage in such behaviors with sufficient frequency, they may cumulatively experience enough boosts to attain higher well-being." Daniel Mochon, Michael I. Norton & Dan Ariely, *Getting Off the Hedonic Treadmill, One Step at a Time: The Impact of Regular Religious Practice and Exercise on Well-Being*, 29 J. ECON. PSYCHOL. 632, 632 (2008).

116. While there is not yet one canonical theoretical model of hedonic adaptation, there are several recent models which provide alternative theories of the processes underlying the general phenomenon of hedonic adaptation. A pair of economists developed an axiomatic mathematical model of individual well-being incorporating cognitive factors. Itzhak Gilboa & David Schmeidler, *A Cognitive Model of Individual Well-Being*, 18 SOC. CHOICE & INDIVIDUAL WELFARE 269 (2001). They assumed that people compare their payoffs to aspiration levels determined by adaptation, past experiences, interpersonal comparisons, others' performances, and reasoning excuses and justifications. Another pair of economists view happiness to be a biological measurement device and tool for decision making which helps people to rank alternative choices. Luis Rayo & Gary S. Becker, *Evolutionary Efficiency and Happiness*, 115 J. POL. ECON 302 (2007). They mathematically demonstrated that hedonic adaptation is evolutionarily advantageous, meaning that hedonic adaptation improves an individual's ability to propagate her genes. A third pair of economists provided a related evolutionary theory of hedonic adaptation and resilience. Liam Graham & Andrew J. Oswald, *Hedonic Capital, Adaptation, and Resilience*, (Feb. 26, 2008) (unpublished manuscript), http://www.iza.org/conference_files/BLE2008/oswald_a262.pdf. Their model is based upon a new concept of hedonic capital they defined to be the stock of psychological coping resources that an individual has available. Finally, a pair of psychologists recently provided another theory of hedonic adaptation they named the AREA model in which people Attend, React, Explain, and Adapt. Timothy D. Wilson & Daniel T. Gilbert, *Explaining Away: A Model of Affective Adaptation*, 3 PERSP. PSYCHOL. SCI. 370 (2008). In their model, hedonic adaptation results from a basic human need to explain and make sense of external stimuli. These alternative models of why hedonic adaptation occurs involve different processes and conceptual understandings about happiness.

cautious approach in applying hedonic adaptation in legal domains. Further, it suggests that it is too early to come to any definitive conclusions regarding the impact hedonic adaptation has on awards for noneconomic damages.

### *C. Rethinking Affective Forecasting*

If hedonic adaptation is less important than the legal hedonists claim, errors in affective forecasting might still be a significant barrier to proper damage awards. In other words, even if the many concerns that we raised above cast doubt on the strength, ubiquity, or importance of hedonic adaptation, those concerns have no such impact on the other surprising finding from happiness research, namely that people are poor predictors of precisely how events will impact their happiness. That finding is still robust; and, in fact, may better explain the meaning of some of the early cross-sectional studies. We quickly review the literature on affective misforecasting. We conclude that even if affective misforecasting presents a problem for jury deliberation (which is still open for debate), there may be means, via introduction of evidence, to mitigate these problems.

Studies have shown that individuals are poor predictors of how life events—like winning the lottery or sustaining an injury—will change their overall life satisfaction and future affective states. Although they might predict whether a particular event would lead to a mix of positive or negative emotions, individuals will likely not predict with any precision the specific mix of emotions they are going to feel ex ante, especially when events produce a combination of positive and negative emotions.[117] More importantly, individuals do a particularly bad job predicting the intensity and duration of any resulting emotional state.[118] Not surprisingly, people are just as poor at predicting how exogenous events will affect other people.[119]

There are a number of reasons for this misprediction. For example, when asked to predict how an event will impact their happiness, individuals focus on the event to the exclusion of the rest of one's life circumstances that may mitigate the impact of the event. Further, individuals may not have familiarity with the event prompting the emotional experience and thus may not be able to predict with any precision how it would really impact someone's life. More importantly, individuals cannot properly draw on past emotional experiences as a guide because they systematically misremember emotional experiences, which, ultimately, distorts their ability to predict future emotional experiences.[120]

A prototypical example of this phenomenon is found in the 2000 election.[121] George W. Bush supporters overestimated how happy they had been when the U.S. 2000 Presidential election had been determined, and four months later, Al Gore supporters

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117. *See* Wilson & Gilbert, *supra* note 9, at 348.

118. *See* Blumenthal, *supra* note 9, at 166–67; Wilson & Gilbert, *supra* note 9, at 347–51.

119. A large body of research documents people's tendencies to underestimate their own and others' abilities to hedonically recover. *See, e.g.*, GILBERT, *supra* note 9; WILSON, *supra* note 9.

120. Blumenthal, *supra* note 9, at 174.

121. Timothy D. Wilson, Jay Meyers & Daniel T. Gilbert, *"How Happy Was I Anyway?" A Retrospective Impact Bias*, 21 SOC. COGNITION 421 (2003).

overestimated how unhappy they had been when the U.S. 2000 Presidential election had been determined.[122]

Even accepting these findings as true, there are several underappreciated aspects of these results. First, while people's overestimation of the duration and intensity of affect might seem undesirable from the point of accurately estimating affect, such inaccuracies serve to effectively motivate people to undertake activities to avoid negative affect and seek out positive affect. After all, inaccurate affective forecasts motivate people to both avoid becoming tort victims and seek out damages from tort litigation. In the jury context, researchers assume that because individuals inaccurately forecast their own future affect, they will also be unable to accurately forecast someone else's future affect, such as that of a plaintiff. But, if tort defendants and plaintiffs believe that juries inaccurately forecast plaintiffs' affect just as plaintiffs do, then such beliefs motivate potential defendants to not cause torts and plaintiffs to sue for damages that in turn provide additional deterrence.

Second, although inaccuracies of affective forecasting can lead people to make choices that fail to result in lasting happiness,[123] these inaccuracies underlie many people's consumption and personal investment. In other words, much of Main Street and Wall Street is fueled by people who mistakenly believe that increased consumer expenditures and stock transactions lead to increased permanent happiness.[124] Indeed, many advertising campaigns and marketing strategies encourage, foster, and reinforce particular types of inaccurate affective forecasting. Although inaccurate affective forecasting can be individually suboptimal in terms of experienced happiness, inaccurate affective forecasting by individuals can be socially desirable in terms of providing financially desirable spillovers and creating happiness externalities for others.[125]

Third, many events to which people have a tendency to hedonically adapt nonetheless can, and indeed will, produce long lasting if not permanent and often irreversible outcomes which in turn produce further affective consequences. For example, George W. Bush clearly made numerous policy decisions that Al Gore would not likely have chosen. Many people believe that such choices have and will cause negative results that are going to last for a long time if not a generation. Presidential elections impact people's affect not only when those results are determined, but also for the length of the President's tenure and possibly much longer. Voters care about who is President because they realize that a President can make a difference for better or worse in terms of many decisions including those about cabinet officials, domestic programs, economic policies, executive orders, federal judicial appointments, foreign

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122. *Id.*

123. Christopher K. Hsee & Reid Hastie, *Decision and Experience: Why Don't We Choose What Makes Us Happy?*, 10 TRENDS COGNITIVE SCI. 31 (2006) (analyzing potentially surprising findings that people systematically fail to predict or choose what maximizes their happiness); Sharples, *supra* note 1 (reporting on related experimental research).

124. *See generally* LEE EISENBERG, SHOPTIMISM: WHY THE AMERICAN CONSUMER WILL KEEP ON BUYING NO MATTER WHAT (2009).

125. Park, *supra* note 1, at 40–42 (reporting on research finding infectiousness of happiness). *See generally* ELAINE HATFIELD, JOHN T. CACIOPPO & RICHARD L. RAPSON, EMOTIONAL CONTAGION (1994) (providing evidence that people tend to "catch" others' emotions).

affairs, and national priorities. The happiness or unhappiness that supporters of particular candidates feel upon learning the results of Presidential elections thus can reflect not only their momentary affect but also their expected future total affect.

In contrast with the view that emotions are mere biases, legal scholar Dan Kahan and psychologist Paul Slovic proposed that emotions can reflect cultural evaluations of risk.[126] We share this viewpoint, which "implies that in order to protect risk regulation from becoming culturally and morally impoverished, regulatory authority should not be delegated solely to experts."[127] Similarly, we believe that in order to protect adjudication from becoming culturally and morally impoverished, tort damages must not be delegated solely to experts.

## III. TORT DAMAGES

We can now return to the legal hedonists' claim that tort victims are overcompensated because they adapt to their injuries and place those claims in the wider debate about jury awards for noneconomic damages. Earlier scholars criticizing indefinite awards—like noneconomic tort damages or punitive damages—have argued that these awards are "too large, highly variable, and unpredictable";[128] that jurors do not consider social consequences of the awards; and that "jurors are biased against wealthy defendants."[129] In other words, they claim that jurors cannot provide consistent and logical noneconomic or punitive awards, and thus, should not be allowed to grant them without significant guidance.[130]

The legal hedonists' new claims dovetail with these earlier arguments. They claim that, if tort victims adapt, damage awards for noneconomic damages like pain and suffering, emotional distress, and loss of enjoyment of life are meaningless and speculative, because (1) the injury is fleeting or illusory and (2) juries cannot adequately predict a plaintiff's true injury.

But this argument depends in large part on a narrow understanding of noneconomic damages and how courts grant them. In this Part, we will address the definitional disjunction between the legal hedonists and the courts.

The legal hedonists narrowly claim that courts grant noneconomic damages for changes in affect (emotional changes) without regard to adaptation.[131] But, there are

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126. Dan M. Kahan & Paul Slovic, *Cultural Evaluations of Risk: "Values" or "Blunders"?*, 119 HARV. L. REV. 166 (2006).

127. Peter H. Huang, Response, *Diverse Conceptions of Emotions in Risk Regulation*, 156 U. PA. L. REV. PENNUMBRA 435, 436 (2008), http://www.pennumbra.com/responses/03-2008/Huang.pdf.

128. GREENE & BORNSTEIN, *supra* note 11, at 23.

129. *Id.* at 23, 24–26 (summarizing the arguments).

130. In response to these criticisms by scholars and practitioners, a number of states have placed legislative caps on the amount that jurors can award for noneconomic damages. And, the Supreme Court declared that there must be a logical relationship between the amount of compensatory damages awarded and the amount of punitive damages awarded. *See* BMW of N. Am. v. Gore, 517 U.S. 559 (1996).

131. For example, Bronsteen, Buccafusco, and Masur clearly view noneconomic damages in affective terms, claiming that the plaintiffs will adapt to "the losses for which these . . . types of damages are meant to compensate." Bronsteen et al., *supra* note 5, at 1538 n.115. Sunstein uses

significant conceptual distinctions in the numerous types of noneconomic awards.[132] Not all of these awards are for changes in affective states, and none of these awards is granted without at least some implicit understanding of adaptation.

As a precursor, recall that courts grant compensatory tort damages to restore an injured party to his or her preinjury position. These awards should reflect both economic losses, such as lost wages, loss of earning potential, and costs associated with medical care and rehabilitation as well as noneconomic losses where there is no obvious external, objective measure for the loss. Common law courts in this country regularly award plaintiffs damages for physical pain; mental suffering, which arises from awareness of the physical pain; mental distress—which encompasses negative mental affect as a result of the injury, such as embarrassment; fright; worry; grief or depression; loss of enjoyment of life; and loss of consortium, society, and companionship.[133] In this Part, we review the theoretical underpinnings and mechanics of awards for several categories of noneconomic damages.

### *A. Pain, Suffering, and Mental Distress*

There is a long history in Anglo-American law of compensation for pain and suffering,[134] and courts have long distinguished "bodily pain" from "mental

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the term "hedonic damages" to mean all noneconomic damages. Sunstein, *supra* note 5, at S160. One suspects that Sunstein's motive is, in part, to paint these losses as connected solely to emotions. Likewise, in discussing damages for loss of enjoyment of life, Bagenstos and Schlanger focus solely on loss of "enjoyment" of life and diminished happiness, despite quoting a more fulsome definition of the damage claim. Bagenstos & Schlanger, *supra* note 5, at 748 (quoting Boan v. Blackwell, 541 S.E.2d 242, 244 (S.C. 2001)).

132. Even if these categories are treated as unitary for purposes of awarding damages, the harm each category describes is distinct.

133. The American Law Institute divides noneconomic torts into four broad categories: (1) tangible physiological pain at the time of the injury and during recuperation; (2) mental anguish and suffering felt both before and after a physical injury; (3) emotional distress and long-term loss of love and companionship from the injury or death of a close family member; and (4) loss of enjoyment of life by victim of a tort. *See* 2 AMERICAN LAW INSTITUTE, REPORTER'S STUDY, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY, 199–200 (1991).

134. The Western tradition of compensating an injured party for economic and noneconomic losses traces its roots to Roman times. At least by 286 BC, Roman law compensated free men and slaves for economic losses caused by negligence; and compensated free men for pain and suffering when injuries were inflicted intentionally. *See* Jeffrey O'Connell & Theodore M. Bailey, *The History of Payment for Pain & Suffering*, 1 U. ILL. L. F. 83, 85 (1972). In Medieval England, injurers made restitution to an injured party and the crown according to a schedule of *bots*—a sum the offender paid the injured party to buy back the peace—and *wites*—a penal fine "paid to the king for breaking the peace . . . [and] to make amends for injuring another." *Id.* at 87 nn.38–39. These payments were made according to the severity of the injury. For instance, the *bot* for exposure of bone was three shillings, loss of an ear was twelve shillings, and loss of a thumb was twenty shillings. *See id.* at 88. This system included payment for noneconomic losses, like shame and injured feelings. *See id.* By the end of the twelfth century, tribunals supplemented the *bot* system; and juries granted damages in addition to the scheduled *bot* payment. Although noneconomic damages were not explicitly discussed, they were likely included as a general element of damage awards. *See id.* at 90. As under the *bot* system, individuals were compensated for slander and loss of honor. *See id.* at 90 n.57 (citing cases).

anguish."[135] Bodily pain is the physical pain felt as a result of an injury, and the damage award compensates for the sensation of pain felt by the injured party at the time of accident and during recuperation. Mental anguish (or suffering), in contrast, refers to the emotional response to that pain; that is, the negative affect that results from feeling pain, whether in the form of anxiety, anger, fear, hurt, etc.

Mental or emotional distress damages reflect negative emotions unrelated to physical pain. This might occur, for instance, when an individual has been defamed or witnessed the injury of a loved one (but has not been physically hurt themselves). In some jurisdictions, emotional distress also encompasses claims for loss of consortium, companionship, love, and affection.[136]

These awards may be for affective states, if not "purely hedonic" in nature.[137] But there is no evidence that juries are instructed to, or actually do, evaluate these damage awards without implicitly or explicitly considering adaptation. To the contrary, when considering pain and suffering, juries are instructed that they may award damages that will reasonably compensate "for any *past physical pain*, as well as pain that is reasonably certain to be suffered in the future"[138] and in doing so "should consider all the evidence bearing on the nature of the injuries, the certainty of future pain, the *severity* and likely *duration* thereof."[139] In considering "past pain" or the "severity" and "duration" of the pain, juries must consider the variable and temporal notion of pain. Thus, juries necessarily consider whether plaintiffs' pain, suffering, and distress have dissipated or persist; and, if the latter, at what level the injury persists. This is an explicit nod to adaptation.

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135. Linsley v. Bushnell, 15 Conn. 225, 235 (1842). Although English courts of the seventeenth and eighteenth centuries seemed to decry awarding noneconomic damages, they regularly awarded damages that could not be justified by strict economic loss. *See, e.g.*, Ash v. Lady Ash, 90 Eng. Rep. 526 (K.B. 1696). But at least by 1773, English courts explicitly allowed noneconomic damages where a plaintiff experienced "great and excruciating pain and torture." Scott v. Shepperd, 95 Eng. Rep. 1124, 1125 (K.B. 1773). And by 1798, following the award in *Scott v. Shepperd*, pleading books included claims for "excruciating pains and tortures both of body and mind." O'Connell & Bailey, *supra* note 134, at 92 (citing 8 J. WENTWORTH, A COMPLETE SYSTEM OF PLEADING 437 (1798); J. CHITTY, A TREATISE ON PLEADING (1809)). By the 1820s and 30s, courts in this country regularly allowed juries to grant damages for pain and suffering. *See id.* at 93. For instance, in rejecting a challenge to a tort verdict as allegedly excessive, the Massachusetts Supreme Court stated: "the plaintiff was exposed to the imminent peril of his life, to great bodily and mental suffering . . . we cannot say that the sum assessed by the jury exceeds a reasonable compensation." Worster v. Proprietors of the Canal Bridge, 33 Mass. (16 Pick.) 541, 547 (1835).

136. Today injured parties can universally recover for pain and mental suffering that results from physical injuries; however a party's ability to recover for mental distress varies from jurisdiction to jurisdiction. *See generally* JEROME H. NATES, CLARK D. KIMBALL, DIANA T. AXELROD, RICHARD P. GOLDSTEIN & ROBERT L. CONASON, DAMAGES IN TORT ACTIONS § 4.01[2] (2007).

137. That is, these awards are granted for changes in emotional states, but are not necessarily tied directly to some notion of happiness.

138. RONALD W. EADES, JURY INSTRUCTIONS ON DAMAGES IN TORT DAMAGES § 6-21 (4th ed. 1998) (emphasis added).

139. *Id.* (emphasis added).

Likewise, where juries consider noneconomic damages as a unitary award, juries are instructed to "compensate . . . for any bodily injury and any resulting pain and suffering, . . . (mental anguish), (and), (loss of capacity for the enjoyment of life) *experienced in the past* (and which you find from the evidence that *he is reasonably certain to suffer in the future* from the injury in question)."[140] Again, there is a temporal nature to the instruction. Juries are asked to consider pain the plaintiff "experienced in the past"[141] and is "certain to suffer in the future."[142] This language implies that noneconomic losses are neither fixed nor permanent. Thus, even to the extent that juries compensate for pain and suffering or mental distress in affective terms, they likely take into account the fact that physiological pain often fades.

We do not read the legal hedonists to argue that awards for noneconomic damages are inappropriate per se. They simply argue that either juries ought to consider adaptation or are incapable of doing so (or both). As to the first argument, it is clear that parties will ask jurors to consider both the affective change and the likely adaptation. One can expect that plaintiffs will put evidence into the record to demonstrate their physical and mental pain. In response, defendants can and will most likely introduce evidence to show that plaintiffs are no longer in the physical or mental pain that they were immediately after the injury. As to the second, even if jurors have trouble anticipating the plaintiff's adaptation, and thus make affective forecasting mistakes, these mistakes may not be a problem for the tort system. As we discuss, it is not clear that awards should be calibrated to postadaptation injuries or that courts are overcompensating when they fail to account for adaptation.[143]

### *B. Loss of Enjoyment of Life*

It is to the other major category of noneconomic damages—loss of enjoyment of life—that Sunstein and Bagenstos and Schlanger address their main arguments.[144] As noted above, the legal hedonists suggest that hedonic damages are inappropriate because they compensate for a loss of happiness. This argument misconstrues the nature of awards for hedonic loss. While courts today use the term "hedonic damages" interchangeably with the term "loss of enjoyment of life,"[145] that does not mean that these damages are necessarily to be understood in affective or *purely hedonic* terms.

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140. EDWARD J. DEVITT, CHARLES B. BLACKMAR & MICHAEL A. WOLFF, 3A FEDERAL JURY PRACTICE AND INSTRUCTIONS, CIVIL § 85.02 (1987) (emphasis added).

141. *Id.*

142. *Id.*

143. *See infra* Part IV.

144. Ubel and Loewenstein, of course, focus more explicitly on pain and suffering, but include a footnote related to damages for loss of enjoyment of life. Ubel & Loewenstein, *supra* note 5, at S197 n.1.

145. *See* Foster v. Trafalgar House Oil & Gas, 603 So. 2d 284, 285 (La. Ct. App. 1992) ("The term 'hedonic damages' . . . is new to our jurisprudence, the concept is not."); Victor E. Schwartz & Cary Silverman, *Hedonic Damages: The Rapidly Bubbling Cauldron*, 69 BROOK. L. REV. 1037, 1040 (2004) ("Prior to the mid- to late- 1980s, courts did not refer to hedonic damages, but instead awarded damages for 'loss of enjoyment of life.'").

As history and common usage shows, courts use the term "hedonic damages" to refer to awards for a loss of capabilities, not a loss of happiness.[146]

The history of damages for loss of enjoyment of life traces back to the middle of the nineteenth century. Although nineteenth-century American courts regularly allowed damages for pain, suffering, and mental distress, courts tended to reject damages for loss of enjoyment of life as being too speculative. For example, in *Columbus v. Strassner*,[147] the Supreme Court of Indiana held that the trial court erroneously instructed the jury that it could take account of any "loss of 'personal enjoyment'" suffered by the plaintiff as a result of the defendant's conduct.[148] The court reasoned that a jury could not define "personal enjoyment," let alone assess a monetary value to a lack of such enjoyment.[149] The court therefore stated that there would be an insuperable difficulty to the measurement of damages because of loss of "personal enjoyment."[150]

Similarly, in *Belleview v. England*,[151] a Kentucky appellate court held, in a slip and fall case, that the trial court erred in giving an instruction that the jury "might compensate the plaintiff for any diminution of his power to pursue the course of life he might otherwise have done."[152] The court held that such an instruction would lead the jury "into a field of speculation too indefinite to afford the basis of legal compensation."[153]

Many courts nonetheless rejected these early concerns, reasoning that awarding damages for loss of enjoyment of life provided complete compensation for injured parties. For instance, despite the Indiana Supreme Court's decision in *Columbus v. Strassner*, Indiana appellate courts at the turn of the twentieth century allowed juries to consider the fact that the plaintiff was "deprived of the pleasure and satisfaction in life that those only can enjoy who are possessed of a sound body, and of the free use of all of its members."[154]

By the 1930s, a number of courts allowed damages under the category of loss of enjoyment of life for loss of capabilities. For example, in *Budek v. City of Chicago*,[155] the court affirmed a damage award of $50,000 for a woman injured in a car accident. In justifying the award, the court noted that the plaintiff was unable to "give normal

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146. In the majority of jurisdictions, courts may instruct a jury that they can award damages for loss of enjoyment of life. The dividing issue is whether these damages are part of pain and suffering or can be awarded as a separate category of damages.

147. 25 N.E. 65 (Ind. 1890).

148. *Id.* at 67.

149. *See id.*

150. *Id.*

151. 18 SW. 944 (Ky. 1909).

152. *Id.* at 995.

153. *Id.*

154. Am. Strawboard Co. v. Foust, 39 N.E. 891, 894 (Ind. App. 1895), *overruled by* South Bend Brick Co. v. Goller, 93 N.E. 37 (Ind. App. 1910); *accord* Pittsburgh, C., C. & St. Louis R.R. Co. v. Cozatt, 79 N.E. 534, 539 (Ind. App. 1906) *overruled by* South Bend Brick Co., 93 N.E. 37. Although these opinions were expressly overruled in *South Bend Brick Company v. Goller*, 93 N.E. at 40, they were the harbinger of courts commonly instructing juries on loss of enjoyment of life.

155. 279 Ill. App. 410 (App. Ct. 1935).

birth to a child"[156] and she was "deprived of the privileges and enjoyments common to people of her class."[157]

In *Daugherty v. Erie Railroad Co.*,[158] the Pennsylvania Supreme Court affirmed a holding that the jury verdict in favor of a plaintiff was inadequate as a matter of law. The court reasoned that the jury had failed to recompense the plaintiff for his permanent disfigurement and his loss of taste and smell. With regard to the plaintiff's appearance, the court stated, "[t]o destroy that good appearance is to destroy one of the greatest treasures a person may possess."[159] The court was even more effusive when it described a loss from an inability to smell or taste:

> One does not need to be a gourmand or gourmet to conclude that the consumption of food and drink represents a not inconsiderable portion of man's enjoyment of life. To be deprived of the capacity to enjoy flavorful dishes and palatable beverages is to be robbed of much of what goes into a rewarding existence . . . .[160]

Even if this award contains an element of affective consideration, the underlying award is for loss of capabilities.

Likewise today, despite calling these damages "hedonic damages," courts still compensate for loss of capabilities. For instance, the Third Circuit stated: "[t]he component relating to loss of enjoyment of life in some respects duplicates the component of pain and suffering, but also represents a deprivation of the opportunity to participate in normal social, athletic, or recreational activities in which a person without [plaintiff's] injury could engage."[161] Similarly, the Tenth Circuit held that in evaluating damages for loss of enjoyment of life, juries could consider whether the injury impaired the plaintiff's ability to enjoy "'the occupation of [his] choice,' 'activities of daily living,' 'social leisure activities[,]' and 'internal well-being.'"[162] In this regard, damages for loss of enjoyment of life have been awarded for loss of one of the five basic senses;[163] an inability to continue to work in one's work or avocation;[164] interference with daily and family recreational activities;[165] and interference with

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156. *Id.* at 429.

157. *Id.*

158. 169 A.2d 549, 550 (Pa. 1961).

159. *Id.* at 552.

160. *Id.*

161. Gumbs v. Pueblo Int'l, Inc., 823 F.2d 768, 774 (3d Cir. 1987).

162. Smith v. Ingersoll-Rand Co., 214 F.3d 1235, 1245 (10th Cir. 2000) (applying New Mexico law).

163. *See, e.g.*, Yako v. United States, 891 F.2d 738, 746 (9th Cir. 1989) (loss of hearing); Early v. United States, 474 F.2d 756, 758 (9th Cir. 1973) (loss of taste and smell); Dyer v. United States, 551 F. Supp. 1266, 1281 (W.D. Mich. 1982) (loss of taste); Carter v. Phillips, 365 So. 2d 48, 50 (La. Ct. App. 1978) (loss of touch); Air Shields, Inc. v. Spears, 590 S.W.2d 574, 579 (Tex. Civ. App. 1979) (loss of sight).

164. *See, e.g.*, Winter v. Pa. R.R., 68 A.2d 513, 514 (Del. 1949) (compensating a musician because of an inability to play privately and publicly even without pay); Fleischmann v. Hanover Ins. Co., 470 So. 2d 216, 218 (La. Ct. App. 1985) (compensating for inability to enter profession for which plaintiff had trained).

165. *See, e.g.*, Varnell v. La. Tech. Univ., 709 So. 2d 890, 896 (La. Ct. App. 1998) (compensating for plaintiff's inability to engage in outdoor activities, participate in school

childbearing.[166] "The range of activities upon which recovery has been based . . . [includes] gardening; sewing; playing with one's children; woodworking; dancing; caring for an invalid spouse; walking or hiking for any considerable distance or time; engaging in 'normal family activities,' including family picnics and shopping; and working for one's community or church."[167] Thus, these are not awards for purely hedonic losses.

Although courts use the terms "hedonic damages"[168] and "loss of enjoyment of life," which suggest affective components, the monikers are misleading. Courts grant loss of enjoyment of life damages not for hedonic or affective changes but for loss of capabilities.

### *C. Definitional Disjunctions*

In sum, the legal hedonists claim that the jury awards for pain, suffering, mental distress, and loss of enjoyment of life are generally understood as damages for changes in affective states without regard to adaptation. This understanding, however, misinterprets the law. Damages for loss of enjoyment of life are, in fact, damages for lost capabilities or lost opportunities—a category of damages that these scholars support. Moreover, while damages for pain and suffering seem to be for changes in affective states, juries may consider past and future damages. Thus juries likely consider relevant postinjury adjustments in plaintiffs' affective states.

## IV. HAPPINESS AND JURIES

Given our skepticism about the nature and power of hedonic adaptation, it is no surprise that we do not find it as a significant barrier to jury awards for noneconomic damages. We previously concluded that the legal hedonists overstate the power, ubiquity, and importance of adaptation and understate the way the tort system

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functions, play with her youngest child, or engage in sexual activities with her husband).

166. *See, e.g.*, McDonald v. United States, 555 F. Supp. 935, 971 (M.D. Pa. 1983) (awarding damages for diminishment of capacity to conceive).

167. NATES ET AL., *supra* note 136, §8.04[5].

168. The term hedonic damages first appeared in 1985. *See* Sherrod v. Berry, 629 F. Supp. 159, 163 (N.D. Ill. 1985). In a wrongful death lawsuit, the victim's father called Stanley Smith, a University of Chicago-trained economist, to testify about the damages suffered as a result of the death of the son. *Id.* at 162. In his expert report and his trial testimony, Smith did not opine on the economic loss that resulted from the son's death, but rather, what he called "the hedonic value of life, separate from economic productive value of an individual." *Id.* In defining the term "hedonic" as used in the phrase "hedonic value of life," Smith testified:

> It derives from the word pleasing or pleasure. I believe it is a Greek word. It is distinct from the word economic. So it refers to the larger value of life, the life at the pleasure of society, if you will, the life—the value including economic, including moral, including philosophical, including all the value with which you might hold life, is the meaning of the expression "hedonic value."

*Id.* at 163. The trial court allowed this testimony over defendants' objection, reasoning first that the deceased's estate could sue for the loss of life and second that "the loss of life means more than being deprived of the right to exist, or of the ability to earn a living; *it includes deprivation of the pleasures of life*." *Id.* (emphasis added).

compensates injured parties. In this Part, we first tie together the reasons why theories about hedonic adaptation do not justify a complete or partial dismantling of the jury award system for noneconomic damages. We then consider how well juries evaluate noneconomic damages even in light of affective forecasting errors. We finally turn to a brief examination of some other issues related to jury awards.

### *A. Hedonic Adaptation and Noneconomic Damages*

As we discussed in detail above, scholars have suggested that hedonic adaptation undermines the theoretical underpinnings of noneconomic damages and concomitant jury awards for those damages. In short, these scholars argue that (1) noneconomic damage awards are granted for changes in affect, (2) changes in affect are fleeting, because people adapt, and thus (3) noneconomic injuries are illusory and the damage awards unfounded. We have a number of responses to these arguments. First, it is not clear that happiness is relevant to monetizing noneconomic injuries. Second, adaptation may not be strong enough or ubiquitous enough to impact all noneconomic injuries. Third, even if happiness is relevant to monetizing noneconomic injuries and adaptation is strong and ubiquitous enough to impact tort victims, it is not clear that we should prioritize a plaintiff's postadaptation feeling of loss over her preadaptation feeling of loss. Fourth, and related, privileging ex post feelings over ex ante feelings is a normative judgment. Lastly, the system does not simply compensate for changes in affect. Rather, the system provides damages for lost capabilities, lost options, and changes in affect with an eye to adaptation.

First, and most importantly, it is possible that the data collected on happiness says little about how to monetize noneconomic injuries. Even questions designed to elicit rankings of subjective well-being and life satisfaction, as opposed to measuring mere affect, may be missing the most fundamental parts of the human existence. The questions may not accurately measure whether people feel meaning or fulfillment, experiential and emotional variety, or a sense of achievement despite negative affect. Indeed, if, as Ubel and Loewenstein reported, injured people are willing to give up significant portions of their remaining years to live without injury,[169] happiness may not be that important a factor to those living with injury. Or, at a minimum, those who are living with injury care about far more than happiness and life-satisfaction. Moreover, there can be no real claim that injuries are not causing noneconomic losses or that those noneconomic losses are somehow illusory.

Second, even to the extent that one believes that the happiness data is important to the process of monetizing injury, hedonic adaptation is not nearly as ubiquitous or strong as once believed, and it is certainly not powerful enough to justify the conclusion that noneconomic awards are illusory. As we discussed,[170] there are significant data suggesting that individuals do not adapt to a number of life circumstances. People do not adapt to diseases or illnesses that get progressively worse or where there is a hope of recovery. Moreover, in noninjury domains people do not adapt to divorce, unemployment, or loss of a loved one. Thus, when someone's injury gets progressively worse or when an injury leads to unemployment or death of a loved

169. *See supra* notes 104–05 and accompanying text.

170. *See supra* Part II.B.

one, her happiness will not necessarily return to preevent levels. Moreover, recent studies have undermined the earlier belief in the strength of adaptation. Recent longitudinal studies suggest that even where there is evidence of adaptation to injury, individual happiness and life satisfaction may only make modest returns.[171] That is, even if people who suffer moderate or significant injuries feel less distress over time, they do not necessarily feel happier or more satisfied with their life. As such, hedonic adaptation may not be as strong as once thought. If hedonic adaptation is not strong or ubiquitous, it may not have a role in monetizing injury.

Third, in arguing that noneconomic losses based on affect are illusory, the legal hedonists claim that one should judge injury postadaptation. But it is unclear why our legal system should normatively consider losses to which people adapt as illusory.[172] To the contrary, to force optimal investment in precaution and to compensate fully, we must consider the preadaptation injury. Suppose that, immediately after an injury, a plaintiff's pain and suffering are valued at one million dollars. Suppose also that, preinjury, the plaintiff enjoyed skiing and writing, but can do neither after the injury. This loss of enjoyment of life may also be valued at one million dollars. Thus, immediately after the injury, the plaintiff had noneconomic losses of two million dollars. If, over time, the plaintiff adapts to her pain and her suffering dissipates to nothing, one who believes that damages should be valued postadaptation might argue she is entitled only to one million dollars in noneconomic damages. And, more starkly, one who believes that happiness is the only way to judge noneconomic losses would argue that she is entitled to nothing. But this argument would take the actual experienced pain and suffering (and possibly a calculation of lost capabilities) completely out of the equation, and would therefore undercompensate the plaintiff. Moreover, this theory would not properly incentivize potential tortfeasors to take proper precaution, because a defendant would not have to completely internalize the negative externality created by the pain and suffering their actions proximately caused.

Said more formally, from a happiness perspective, a jury should award an amount in monetary damages equal to the area under the curve that represents instantaneous happiness on the vertical axis and time on the horizontal axis from the moment of injury until whenever there is complete hedonic recovery from the injury.[173] In other words, the amount of monetary award should be the integral of the instantaneous happiness function over time from the moment of injury until there is complete hedonic adaptation if and when that occurs. Only by awarding this amount can the legal system

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171. Lucas, *supra* note 62, at 726; see *supra* Part II.B.2.

172. If one were to take seriously the argument that injury should be judged postadaptation, then this argument suggests three corollaries. First, tortfeasors will have to introduce testimony about a victim's preinjury baseline happiness, against which her postinjury happiness can be judged. Second, injured parties should have a duty to mitigate their losses by taking all possible steps to improve the rate or completeness of adaptation. Third, we should consider having tortfeasors provide more than monetary compensation to victims of torts. Tortfeasors could provide or subsidize activities that foster adaptation, such as courses about new skills or hobbies (unrelated to work), meditation, therapeutic counseling, or vocational retraining. But these corollaries are thus far unexplored by the legal hedonists.

173. This time series will include any lingering memories of pain or mental anguish. That is, adaptation is not complete as long as tort victims still suffer negatively from memories of the pain and suffering.

and society ensure that potential defendants will take proper precautions and that injured plaintiffs will be properly compensated.

Fourth, legal hedonists privilege an individual's ex post experienced happiness over that same person's ex ante decision utility.[174] That is, the legal hedonists assume that if and when a plaintiff's experienced happiness has returned to preinjury levels, she should not be compensated for that injury.[175] They assert that this assumption is true, even if, after the plaintiff's happiness returns, she prefers to live without injury or still prefers to be compensated for her injuries.[176] But, as we discussed earlier, a plaintiff's true well-being is not equal to just her experienced happiness. Simply measuring one's happiness as a proxy for well-being misses important aspects of one's well-being. For example, people may choose activities that will actually reduce their experienced happiness. Such decisions can provide meaning, increase the variance and intensity of emotions, fulfill unfulfilled altruistic motivations, or allow for exercise of fundamental capabilities. We are not suggesting that a plaintiff's decision to litigate is entirely reflective of her well-being either. But we believe that an individual's true well-being is not just limited to experienced affect.

Another way to appreciate how legal hedonists privilege a particular time slice of life is to view emotions over a timeline ranging from before a decision is made to after one is made. People feel anticipatory emotions, such as anxiety and exuberance, before making decisions. People also forecast how they will feel if they make certain decisions. These affective forecasts are called anticipated emotions, also referred to as decision utility.[177] Once people make decisions but even before those decisions' outcomes are realized, people feel interim emotions, such as dread or savoring. People also still have their decision or predicted utility forecasts. The moment outcomes of decisions materialize, people feel experienced affect (also referred to as experienced utility),[178] such as disappointment or relief. Finally, after outcomes of decisions materialize, people feel ex post emotions and experience remembered utility.

The central point of the above timeline is that emotions vary over the course of the decision-making process. In particular, psychological research studies find that predicted and remembered emotions have a tendency to coincide and both differ from experienced emotions.[179] Such temporal differences in emotions mean that people

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174. Neoclassical economics views a person's decision utility as information that can be inferred from or revealed by that person's choices if that person's behavior satisfies certain assumptions, notably the so-called weak axiom of revealed preference. Paul A. Samuelson, *A Note on the Pure Theory of Consumer's Behaviour*, 5 ECONOMICA 61, 62–71 (1938) (introducing the weak axiom of revealed preference).

175. For Bagenstos and Schlanger, this argument is grounded in a belief that compensation for disability causes its own dignitary harm, not purely in a notion that the losses themselves are illusory. Bagenstos & Schlanger, *supra*, note 5.

176. *See supra* notes 104–05 and accompanying text.

177. *See* Barbara A. Mellers & A. Peter McGraw, *Anticipated Emotions as Guides to Choice*, 10 CURRENT DIRECTIONS PSYCHOL. SCI. 210 (2001); Dylan M. Smith, Stephanie L. Brown & Peter A. Ubel, *Are Subjective Well-Being Measures Any Better Than Decision Utility Measures?*, 3 HEALTH ECON., POL'Y & L. 85 (2008).

178. Daniel Kahneman & Richard Thaler, *Utility Maximization and Experienced Utility*, J. ECON. PERSP., Winter 2006, at 221.

179. *See, e.g.*, Terence R. Mitchell, Leigh Thompson, Erika Peterson & Randy Cronk, *Temporal Adjustments in the Evaluation of Events: The "Rosy" View*, 33 J. EXPERIMENTAL SOC.

themselves as well as law and policy makers have to balance or choose among the well-being of predicting selves, experiencing selves, and remembering selves. The legal hedonists favor people's experiencing selves over their predicting selves and remembering selves. We believe that just as cogent a case can be made in favor of people's predicting selves or their remembering selves.

Lastly, and related, some legal hedonists argue that noneconomic damages should be aimed at compensating for lost capabilities rather than solely for changes in affective states. In other words, they argue that even if people who have suffered injuries were to experience complete hedonic adaptation, they nonetheless have lost an option to engage in certain activities, and this loss should be compensated. As we discussed, the law already aims to compensate for lost capabilities, experiential and emotional variety, and for lost opportunity in the form of damages for loss of enjoyment of life. But leave that aside for a moment. Importantly, the legal hedonists may not have properly considered the importance of emotional variance in the pricing of lost capabilities or options. Capability damages can be understood as compensating a tort victim for losing the flexibility or freedom to engage in certain activities.[180]

One way to understand capabilities is to think of them as real options—that is, rights, but not obligations—to make decisions, such as options to abandon, delay, expand, or undertake capital investments (like constructing new factory plants or drilling for oil).[181] Unlike financial options, real options usually are not and cannot be traded. Nonetheless, empirical techniques and theoretical insights about financial option valuation can be applied to valuation of real options.[182] Under certain hypotheses, the value of a financial option increases with the volatility of the price of

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PSYCHOL. 421, 422–27 (1997); Robert I. Sutton, *Feelings about a Disneyland Visit: Photography and the Reconstruction of Bygone Emotions*, 1 J. MGMT. INQUIRY 278, 280–81 (1992); Leaf Van Boven & Laurence Ashworth, *Looking Forward, Looking Back: Anticipation is More Evocative than Retrospection*, 136 J. EXPERIMENTAL PSYCHOL.: GEN. 289, 289–91 (2007).

180. Such a perspective is related to 1972 economics Nobel Laureate Kenneth Arrow's proposal about one way to incorporate freedom into a formal economic theory of choice. Kenneth J. Arrow, *A Note on Freedom and Flexibility*, *in* CHOICE, WELFARE, AND DEVELOPMENT 7 (Kaushik Basu, P. Pattanaik & K. Suzumura, eds., 1995). Arrow's notion of people being free to enjoy preference flexibility is motivated by and similar to "the concept of flexibility, where there is a sequence of decisions in the face of uncertainties." Kenneth J. Arrow, *Freedom and Social Choice: Notes in the Margin*, 18 UTILITAS 52, 57 n.18 (2006).

181. *See, e.g.*, MARTHA AMRAM & NALIN KULATILAKA, REAL OPTIONS: MANAGING STRATEGIC INVESTMENT IN AN UNCERTAIN WORLD 3–6 (1999); JONATHAN MUN, REAL OPTIONS ANALYSIS: TOOLS AND TECHNIQUES FOR VALUING STRATEGIC INVESTMENT AND DECISIONS 459–68 (2d ed. 2005). "Real options" are so named as to differentiate them from "financial options," which are defined to be rights, but not obligations, to either buy or sell a particular underlying financial asset. Familiar examples of financial options are stock options that many corporations provide their executives, directors, and officers as part of their incentive compensation packages.

182. Scholars have applied real options analysis to value lawsuits. *See, e.g.*, Joseph A. Grundfest & Peter H. Huang, *The Unexpected Value of Litigation: A Real Options Perspective*, 58 STAN. L. REV. 1267, 1270 (2006); Peter H. Huang, *A New Options Theory for Risk Multipliers of Attorneys' Fees in Federal Civil Rights Litigation*, 73 N.Y.U. L. REV. 1943, 1946 (1998); Peter H. Huang, *Lawsuit Abandonment Options in Possibly Frivolous Litigation Games*, 23 REV. LITIG. 47, 49–50 (2004).

the underlying asset of that option.[183] An analogous result in real options theory is that the value of a real option increases with the volatility of the value of the decision that is associated with that real option. Applying this result to capability damages—understood as compensating for the loss of real-option values to engage in activities that generate a range of feelings—implies that capability damages should increase with the variance of emotions that result from such activities.[184] In other words, from a real-options perspective, being unable to engage in activities that involve a wide range of emotions should result in higher damages than being unable to engage in activities that involve a narrow range of emotions. So if parenting involves a high variance of emotions,[185] then being unable to be a parent should entail high real-options damages. Similarly, there should be high real-options damages for the example that Ubel and Loewenstein provide of "a person who suffers brain damage from an industrial accident and is turned into a happy simpleton because of the injury."[186]

### *B. Jury Awards and Noneconomic Damages*

But even if hedonic adaptation is not a reason to undermine tort damage awards, the legal hedonists may argue that affective forecasting errors demonstrate the unreliability of jury awards.

A central question tort lawsuits must answer is whether juries are awarding the correct amount for noneconomic damages. This question, of course, just begs the basic question what we mean by the "correct amount." The answer, from a purely law and economics perspective, is to choose a level of damages that balances deterrence of tortfeasors and compensation of tort victims.[187] Tort compensation may also serve an expressive or symbolic function, demonstrating that harming others is a wrongful act that causes dignitary harm beyond the physical and emotional damages.

In selecting the level of damages, courts do not and should not consider only happiness. Rather, courts can and should award tort victims compensatory damages for any or all five of these conceptually and theoretically distinct but often practically and realistically intertwined harms: (1) pain and suffering, (2) lost capabilities, (3) emotional distress, (4) decreased life satisfaction, and (5) the "sweat and tears" victims expend in recovering from injuries. This last component of compensatory tort damages can be analogized to damages in antitrust litigation—including a component for expenditures that plaintiffs had to make in response to defendant's wrongful conduct. We have in mind various emotional, mental, and physical anguishes, as well as efforts and labor that plaintiffs incur during their recovery activities. This compensation is distinct from and should be contrasted with such out-of-pocket expenses as money spent on crutches, drugs, physical-rehabilitation therapy, or wheelchairs, for which

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183. Robert C. Merton, *Theory of Rational Option Pricing*, 4 BELL J. ECON. & MGMT. SCI. 141, 149 (1973).

184. Loewenstein & Ubel, *supra* note 56, at 1802.

185. *Id.*

186. Ubel & Loewenstein, *supra* note 5, at S206.

187. This answer in turn only begs other questions, such as whether such compensation should include how court procedures affect peoples happiness. Jose Mulder, *How Do We Compensate A Victim's Loss? An Economic Perspective*, (Tilburg Law and Economics Center Discussion Paper No. 2008-12 Mar. 2008).

plaintiffs can and should also be compensated for under the category of economic damages.

A possible way to assist juries in determining compensatory damages is to utilize novel empirical research about how people spend time and how they feel during various activities.[188] This research involves two alternative types of survey data based primarily upon the new Princeton Affect and Time Survey, that is a diary-based national survey measure of time use and affective experience.[189] The first entails self-reports of these six affective experiences: feeling interested, stressed, happy, sad, pain, and tired.[190] The second is the U-index,[191] which measures the percentage of time spent in an unpleasant state, which in turn is defined as an episode in which the strongest emotion is negative.[192]

Both types of data can help juries normatively evaluate how tort victims change how they spend their time before and after a tort. The key point is, regardless of the degree that happiness can adapt following an injury, tort victims are going to allocate their scarce time differently postinjury compared to preinjury. Tort victims are going to be unable to engage in some activities postinjury and have to engage in some other activities postinjury because of the injury. Reallocations of time and changes in activities imply different quantities and types of experienced affect. These resulting affective changes provide data that can inform jury deliberations about compensatory damages. Of course, juries have to convert such changes in experienced affect into dollars. Although that conversion can certainly be a daunting undertaking, it can benefit from expert testimony based upon econometric analysis of happiness regression equations.[193]

We believe that jurors are better suited to determine and evaluate compensatory damages for individual plaintiffs[194] than technocratic experts will be at developing a set of civil damages guidelines;[195] a random panel of citizens will be at developing and ranking a list of representative injuries grouped into categories of compensation;[196] or federal or state legislators would be in setting maximum damage amounts.[197] Obviously, jurors face a difficult task in monetizing pain, suffering, or loss of enjoyment of life.[198] But trial by jury provides a unique opportunity to individuate damages. As two preeminent empirical jury scholars Neil Vidmar and Valerie Hans observed:

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188. *See* Krueger, *More Fun*, *supra* note 25, at 194–95.
189. *Id.*, at 194.
190. *Id.*
191. Kahneman & Krueger, *Developments*, *supra* note 25, at 19.
192. *Id.*
193. *See, e.g.*, Oswald & Powdthavee, *supra* note 87.
194. Ubel & Loewenstein, *supra* note 5, at S212.
195. Sunstein, *supra* note 5, at S184–86.
196. Ubel & Loewenstein, *supra* note 5, at S208–09.
197. *Id.* at S210–11.
198. NEIL VIDMAR & VALERIE P. HANS, AMERICAN JURIES: THE VERDICT 284 (2007) ("There is no way to place an exact figure on what such injuries are worth. The jury has to consider the individual circumstances and local community norms. At trial, plaintiffs or spouses testify about what the injury has done to their lives, providing the jury with insight about the consequences of the injury.").

> The jury is in a position to decide, as well as anyone, the special circumstances of pain suffered by the plaintiff. Consider people who have lost a leg due to negligence. Sometimes amputees experience excruciating "phantom pain" that is unabating, and doctors can do little but prescribe heavy doses of pain medicine. In contrast, a second person with an identical amputation injury will experience no pain; a third person will have intermittent pain. Similar differences occur with whiplash injuries. Some people have stronger tolerance for pain or mental anguish, but others have weaker tolerance. The jury is asked to consider the special circumstances of the plaintiff.[199]

Moreover, excerpts of real jury deliberations from the Arizona Jury Project—a research initiative to analyze implications of several jury reforms—reveal that jurors individually and collectively[200] "[take] their task very seriously, often to the extent of calculating and arguing down to the last dollar."[201]

Despite the advantages of individuation, the legal hedonists could argue that juries may neither comprehend nor listen to jury instructions that judges provide; the legal system does not monitor juries to ensure that juries actually follow instructions; and that, as a result of errors in affective forecasting, individual jury members will make systematic errors in awarding noneconomic damages, even if they understand the instructions. But juries deliberate and it remains an open empirical question whether jury deliberation mitigates, exacerbates, or does not change individual jury member's affective forecasts.

It is true that jury instructions on noneconomic damages are notoriously vague[202] and are thus likely too complex to follow or provide adequate direction to jurors.[203]

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199. *Id.* at 295.

200. A unique aspect of jury awards is that they result from a deliberative process. As Vidmar and Hans observed:

> A representative, diverse jury promotes vigorous debate. One of the most dramatic and important changes over the last half century is the increasing diversity of the American jury. Diverse juries have an edge in fact-finding, especially when the matters at issue incorporate social norms and judgments, as jury trials often do. Deliberation improves comprehension. Jurors with expertise on a topic often take a lead role when the jury discusses that topic, and errors made by one juror are frequently corrected by another juror. Deliberations encourage the sharing of knowledge and also the testing of narrative accounts. The representative jury and its verdicts are also seen as more legitimate by the public, an important strength of the jury as an institution.

*Id.* at 340.

201. *Id.* at 299.

202. Vidmar and Hans observe:

> Instructions on pain and suffering implicitly acknowledge the vagueness of the jury's task. For instance, a North Carolina jury instruction says: "Damages should include such amount as you find, by the greater weight of the evidence, is fair compensation for the actual physical pain and mental suffering which were the immediate and necessary consequences of the injury. There is no fixed formula for evaluating pain and suffering. You will determine what is fair compensation by applying logic and common sense to the evidence.

*Id.* at 295.

203. Research demonstrates that "straightforward revisions to complicated legal instructions

Further even if the instructions were clear, jurors "do not always—and probably cannot always—faithfully follow instructions. They are imperfect decision makers."[204] But various jury reforms can help jurors do a better job.[205] And even if there are some reports of extravagant jury awards, the average award is not out of line, and there is research showing that juries tend to reward more severe injuries with greater damages.[206]

Further, it is important to remember that juries do not work alone in the judicial process and that trial judges and postverdict settlements can play a significant role in shaping awards.

As Professors Vidmar and Hans concluded:

> As we evaluate the case for the jury, we observe many signs that the American jury is a sound decision maker in the majority of . . . civil . . . trials. Very significant to us are the research findings that identify the strength of the evidence presented at the trial as the major determinant of jury verdicts. Civil jury awards are strongly correlated with the negligence and degree of injury. These reasonable patterns in jury decisions go a long way to reassuring us that juries, by and large, listen to the judge and decide cases on the merits of the evidence rather than on biases and prejudice.
>
> Furthermore, in systematic studies spanning five decades, we find that judges agree with jury verdicts in most cases. . . . Most judges say that jurors make a serious attempt to apply the law, and they do not see jurors relying on their feelings rather than the law in deciding on a verdict.
>
> The jury's distinctive approach of commonsense justice best explains the divergence between judge and jury. These juror values affect the verdicts primarily in trials in which the evidence is relatively evenly balanced and a verdict for either side could be justified. Other studies, showing that the judgments of medical experts and arbitrators converge with jury decisions, reinforce this basic conclusion.[207]

Moreover, it is unclear that judges or administratively mandated caps on noneconomic damages (such as those suggested by the legal hedonists) would better approximate ideal damage awards. First, to the extent that hedonic adaptation occurs, there is not significant information about rates of hedonic adaptation.[208] This lack of

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produce better understanding and better application of the law." *Id.* at 342; PETER M. TIERSMA, COMMUNICATION WITH JURIES: HOW TO DRAFT MORE UNDERSTANDABLE JURY INSTRUCTIONS (2006), *available at* http://www.ncsconline.org/Juries/communicating.pdf.

204. VIDMAR & HANS, *supra* note 198, at 163.

205. For example, reforms that are designed to make jury trials better approximate ideal educational practices, such as permitting jurors more active roles during trials, can produce benefits without introducing any feared countervailing harmful side effects. *Id.* at 343–44, 396.

206. *See* VIDMAR & HANS, *supra* note 198, at 299–302. *See generally* GREENE & BORNSTEIN, *supra* note 11.

207. VIDMAR & HANS, *supra* note 198, at 339–40.

208. There is recent evidence that hedonic adaptation is a nonlinear dynamic process because the speeds at which formerly fully employed people hedonically adapted to unemployment decreased with the length of unemployment with the majority of hedonic adaptation taking place in the first year of unemployment. *See* Yannis Georgellis, Andros Gregoriou, Jerome Healy &

data means that there is a significant gap in the data that is necessary to properly price damages. More importantly, no study could provide data about individual hedonic adaptation. That is, even if there is adaptation for a given injury in the population as a whole, how much and at what rate any particular individual adapts may differ and may depend on demographic and individual characteristics.[209]

Second, even if we depended on judges to individuate, there is no evidence that judges would do a better job. Recent studies suggest that federal magistrate judges are unable to follow instructions, make decisions almost identical to juries, and are affected by cognitive biases and heuristics just like the general public.[210] In fact, "regular exposure to particular types of cases, defenses, and even specific litigants may create expectations in judges that are hard to overcome. Because a jury is composed of persons without repetitive exposure[,] the jury system gives every litigant the benefit of a fresh look."[211]

Third, legislative or administrative caps on noneconomic damages (as proposed by Sunstein[212] and Ubel and Loewenstein[213]) may exacerbate inequitable awards. For example, medical malpractice cases—a particularly controversial set of tort lawsuits—raise several additional issues about noneconomic damages. The main and often-heard complaint about jury awards in medical malpractice lawsuits is that juries are far too generous in making pain and suffering awards.[214] Such complaints have led some tort reformers to propose caps on pain and suffering awards based upon arguments that such awards provide underserved windfalls for plaintiffs and their attorneys, who earn a percentage of those awards. In 1975, California enacted a $250,000 cap on pain and suffering and other general damages.[215] This example provided a model that twenty-three states have since followed.[216]

But, are pain and suffering awards really the windfalls that they are purported to be? A study of birth and emergency room injuries found that final award amounts averaged only twenty-two percent more in compensation than actual economic losses.[217] Twenty-two percent is not really such a windfall for a severely injured tort victim. In addition, the Wisconsin Supreme Court overturned its $350,000 cap on pain and suffering in medical malpractice cases because it concluded that caps produce inequitable

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Nikolaos Tsitsianis, *Unemployment and Life Satisfaction: A Non-Linear Adaptation Process*, 29 INT'L J. MANPOWER 668, 676–77 (2008); *see also* Yannis Georgellis, Andros Gregoriou & Nikolaos Tsitsianis, *Adaptation Towards Reference Values: A Non-Linear Perspective*, 67 J. ECON. BEHAV. & ORG. 768, 769 (2008) (finding non-linearity of adjustment dynamics towards reference points in job satisfaction).

209. *See* Lucas, *supra* note 62, at 728.

210. Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Judging by Heuristic: Cognitive Illusions in Judicial Decision Making*, 86 JUDICATURE 44, 50 (2002); Chris Guthrie, Jeffrey J. Rachlinski & Andrew J. Wistrich, *Inside the Judicial Mind*, 86 CORNELL L. REV. 777, 821 (2001).

211. VIDMAR & HANS, *supra* note 198, at 342.

212. Sunstein, *supra* note 5, at S184–86.

213. Ubel & Loewenstein, *supra* note 5, at S210–11.

214. TOM BAKER, THE MEDICAL MALPRACTICE MYTH (2005).

215. CAL. CIV. CODE § 3333.2 (2009).

216. *See* Ronen Avraham, *Database of State Tort Law Reforms* (Northwestern Law & Econ. Research Paper No. 06-08, 2006), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=902711.

217. Frank A. Sloan, Penny B. Githens, Gerald B. Hickson & Stephen S. van Wert, *Compensation*, *in* SUING FOR MEDICAL MALPRACTICE 187, 195 (1993).

consequences especially to severely injured plaintiffs.[218] A systematic analysis of jury verdicts in California, Florida, and Maryland found that caps disparately impacted monetary recoveries by children, elderly people, and women.[219] That study pointed out how cap laws "place an effective ceiling on recovery for certain types of injuries disproportionately experienced by women, including sexual assault and gynecological injur[ies] that impair childbearing or sexual functioning."[220] A similar argument has been made that, although statutory caps on noneconomic damages are facially neutral, they have an unintended consequence of disproportionately disadvantaging women.[221] An empirical study of California's $250,000 cap for noneconomic damages concluded that: "Plaintiffs with the most severe injuries appear to be at the highest risk for inadequate compensation. Hence the worst-off may suffer a kind of 'double jeopardy' under caps."[222]

Under our previous analysis of the limits to hedonic adaptation, people do not completely adapt hedonically to recurring pain or severe disfigurement, both of which are situations that often lead to depression or unemployment—two further events to which people only incompletely hedonically adapt. Thus, the heterogeneity and incompleteness of hedonic adaptation provide two additional reasons to be concerned that caps on pain and suffering damages are going to exacerbate inequities that already exist in our society and legal system.

## CONCLUSION

We believe that recent happiness research is of tremendous importance not only intrinsically,[223] but also practically in applications to law and policy.[224] Happiness research, especially of the positive psychology variety, can yield guidance to individuals and institutions about creating and sustaining happiness, making better choices, and leading more productive and engaged lives.[225] But we currently have serious concerns about making significant public policy changes based upon an incomplete, nascent body of empirical research. We also believe that law and policy are better when based upon research from nonlaw fields including anthropology, economics, neuroscience, political science, psychology, and sociology. But in the

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218. Ferdon v. Wis. Patients' Comp. Fund, 701 N.W.2d 440, 485 (Wis. 2005).

219. Lucinda Finley, *The Hidden Victims of Tort Reform: Women, Children, and the Elderly*, 53 EMORY L.J. 1263, 1284–1312 (2004).

220. *Id.* at 1313.

221. *See generally* Rebecca Korzec, *Maryland Tort Damages: A Form of Sex-Based Discrimination*, 37 U. BALT. L.F. 97, 97–98 (2007).

222. David M. Studdert, Y. Tony Yang & Michelle M. Mello, *Are Damage Caps Regressive? A Study of Malpractice Jury Verdicts in California*, HEALTH AFF., July/August 2004, at 54, 63.

223. *See generally* SONJA LYUBOMIRSKY, THE HOW OF HAPPINESS: A SCIENTIFIC APPROACH TO GETTING THE LIFE YOU WANT 13–26 (2007).

224. *See, e.g.*, Mark A. Cohen & Michael P. Vandenbergh, *Consumption, Happiness, and Climate Change*, 38 ENVTL. L. REP. 10834, 10834–35 (2008); Paul Dolan & Mathew P. White, *How Can Measures of Subjective Well-Being Be Used to Inform Public Policy?*, 2 PERSP. PSYCHOL. SCI. 71, 72–73 (2007).

225. *See, e.g.*, Blumenthal & Huang, *supra* note 22; Huang & Swedloff, *supra* note 33, 339–42.

history of science,[226] there has been a pattern of new ideas and novel insights being too quickly and inaptly applied, only to create a backlash followed by more careful and nuanced applications. Scholars can and should be more creative and precise in developing the subtle legal policy implications of happiness research that pays close attention to economic and psychological realities. Both of us have already expressed a number of concerns and reservations towards basing legal policy about settlement decisions in civil lawsuits upon earlier findings regarding hedonic adaptation.[227] Our concerns here are similar. We simply do not believe that current data on hedonic adaptation support eliminating a basic building block of our civil justice system. It is not yet clear that hedonic adaptation actually plays, or even should play, a role in monetizing noneconomic damages. There are significant data about hedonic adaptation, but all of it points in different theoretical directions. Just as theories without data can be speculations, data without any theory can be uninformative. Lacking such a unified theoretical foundation, the mass of data that is being produced has multiple interpretations and thus is not as useful as it could be to legal policy makers. Thus, we believe that legal policy based on hedonic adaptation is not yet ready for prime time.

We believe that juries can and should play a vital role in assessing and individuating damage awards. This role is extremely important in the noneconomic context, where juries cannot just look to medical bills or income projections to mechanically craft a damage award. Here, where the data supporting the argument against jury awards are not that strong, we disagree with dismantling such a vital civil system as the jury system. That being said, juries could benefit from additional guidance. This guidance might come in the form of expert testimony about happiness,[228] additional lay testimony about individual adaptation or loss of real options as a result of injury, or improved jury instructions. More research, however, is necessary to fully evaluate the best means to deliver these messages to juries. For example, new technologies for neuroimaging have the potential to revolutionize the detection, verification, and legal determination of an individual's pain and its extent.[229] There is also research that

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226. *See generally* THOMAS S. KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS (1996).

227. Peter H. Huang, *Emotional Adaptation and Lawsuit Settlements* 108 COLUM. L. REV. SIDEBAR 50, 52–55 (2008), http://www.columbialawreview.org/Sidebar/volume/108/50_Huang.pdf; Rick Swedloff, *Accounting for Happiness in Civil Settlements*, 108 COLUM. L. REV. SIDEBAR 39, 40–46 (2008), http://www.columbialawreview.org/Sidebar/volume/108/39_Swedloff.pdf.

228. For example, two economists recently utilized happiness regression equations to determine compensatory damages for emotional harm and pain and suffering in tort cases involving death of a loved one. Oswald & Powdthavee, *supra* note 87. One of these economists has estimated monetary values for how much increased life satisfaction individuals experience due to more frequent interaction with their friends, relatives, and neighbors based upon the British Household Panel Survey. Nattavudh Powdthavee, *Putting A Price Tag on Friends, Relatives, and Neighbours: Using Surveys of Life Satisfaction to Value Social Relationships*, 37 J. SOCIO-ECON. 1459, 1474–75 (2008).

229. Ron Kupers & Henrik Kehlet, *Brain Imaging of Clinical Pain States: A Critical Review and Strategies for Future Studies*, 5 LANCET NEUROLOGY 1033, 1038–39 (2006); Noel Shafi, *Neuroscience and Law: The Evidentiary Value of Brain Imaging*, 11 GRADUATE STUDENT J. PSYCHOL. 27, 37 (2009), *available at* http://www.tc.columbia.edu/i/a/document/11330_V11Article4.pdf; David Yokum, *Neuroimaging the Brain in Pain: Medical Disability, Tort Law, and an Ethical Evaluation*, 9 J. PAIN SUPP., Apr. 2008, at 79 (abstract describing poster

suggests genetic differences may underlie why people differ in their adaptation to, experience of, and memories about pain.[230]

presentation); Betsy Grey, Neuroscience and Emotional Harm in Tort Law: Rethinking the American Approach to Free-Standing Emotional Distress Claims, (Nov. 4, 2009), (unpublished manuscript available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1499989).

230. *See, e.g.*, Jon-Kar Zubieta, Mary M. Heitzeg, Yolanda R. Smith, Joshua A. Bueller, Ke Xu, Yanjun Xu, Robert A. Koeppe, Christian S. Stohler & David Goldman, *COMT val158met Genotype Affects μ-Opioid Neurotransmitter Responses to a Pain Stressor*, 299 SCI. 1240, 1240 (2003); Jennifer Thomas, A Single Gene May Hold Clue to Pain Management, http://www.maimonidesmed.org/111082.cfm.